The Milroy Lecture

ON

DARWINISM AND RACE PROGRESS.

Delivered before the Members of the Royal College of Physicians at the Examination Hall, Victoria Embankment, Feb. 15th, 1894.

BY J. BERRY HAYCRAFT, M.D.EDIN. &c.,
PROFESSOR OF PHYSIOLOGY, UNIVERSITY COLLEGE, CARDIFF.

LECTURE I.

THE BIOLOGICAL STANDPOINT.

MR. PRESIDENT AND GENTLEMEN,—The words *mederi*, to heal, *medicus*, the healer, and *medicina*, the remedy, indicate pretty clearly the relationship that existed, even up to recent times, between the medical profession and humanity at large: to cure the sick was the duty of the physician. Of late years, as our knowledge of disease has increased, and as the power to use the remedy has likewise increased, a useful and healthy scepticism has also arisen as to whether or not we have as much power over a disease when once it has established itself as was formerly thought to be the case. With real power a knowledge of the limits of that power has also come; and so it is that our energies are being spent at present to a large measure in the "prevention" of disease. Even Hercules, hew as he might, could not rid the demon Hydra of its heads; Iolaus it was who with his burning iron prevented their growth. As soon as it was realised that disease was not the result of a special visitation of divine wrath, or of the association of the afflicted individual with an unlucky star, but that it was due to conditions of life under our control, preventive medicine arose to control these conditions, and wonderful have been the results achieved. On public platform, by book and pamphlet, and still more by quiet, unostentatious advice and help, the profession have been and are educating the people to live lives which are conducive to health and happiness. In many ways is this being done, but it is enough to instance those deadly foes to so many amongst us, the germs of zymotic disease, which are being studied, and whose extermination is attempted, not without remarkable success. The enthusiast might almost believe that the dreams of Condorcet will ultimately be realised and that our race may live free from disease and almost free from death, like the shepherds we picture in the mountains and forests of Arcadia. Facts, however, have come to light during recent years which should compel us to pause and see whether our work is altogether progressive, whether humanity as a whole, as a race, will be benefited by all that we are doing. The biologists are telling us that the effects of influences, both good and bad, under which we live are not transmitted to our offspring—that there is no accumulation of slight improvements capable of transmission to build up a perfect race. An unhealthy, feeble stock, in spite of constant sanitary attention, may always remain debilitated, and a race of fools can never by the constant and direct action of education alone be turned into a race of wise men and women. In times more primitive, and before the action of preventive medicine, the foolish and the sickly have as a rule gone to the wall, and the race has recruited itself from the most fit and owes its qualities to that "selection" of the fit and elimination of the less fit which have always been going on. If it is by "selection" that races of men, animals, and plants have come to be what they are, and if, as the biologists tell us, "selection" is by far the most powerful means of producing further change, then surely it behoves us to consider, firstly, whether this is true, and, secondly, if true, how it ought to affect our efforts as helpers of humanity. It is to these two questions that I wish to invite your attention in these lectures, for I believe that their consideration will repay our closest study. I believe that our ideas regarding almost every social question must be reviewed from this biological standpoint, which I hope to show is the correct one. Education, charity, criminal legislation, marriage, and divorce law, must be looked upon from the point of view of their effects upon race progress. Just as the physician has already taught humanity to look ahead, to adopt for the future such precautions as may give him safety from disease, so I believe it will be our duty to look further ahead and to teach men to act for the sake of their children's children. The world is full of social faddists and nostrum-mongers. They are often an irritation if not a danger to society; they flood the platform with ignorant shoutings about subjects upon which they are ignorant and which become a danger through this very ignorance; they even invade the national assemblies. Can there, then, be any greater safeguard for the State or any means more perfect for its further development than the possession of a body of men, brought as we are into intimate relation with all its citizens and endowed with real knowledge of the problems of life, the history of its past development, and of the ways and means whereby its future progress may with certainty be carried out. Being a large body of men, our views as a whole will not be too progressive; they will be in advance enough to help, not enough to repel. Fashions come and go with every season, but organic change is slow; it is for this organic betterment that we must patiently strive, for its attainment will be the greatest goal that humanity has ever reached.

Allow me, then, to invite your attention to what the biologists have discovered concerning racial change and the conditions under which this change occurs. The practical facts that they have gleaned rarely if ever appear in these writings without a commingling with purely speculative fancies; indeed, the latter are often dwelt upon at so great a length that one is apt to lose sight of the former altogether. This will be my excuse for alluding to these speculations, not so much to traverse them as to separate sharply fact from fancy, what we know from what we do not know. It is evident that in applying in practical matters the lessons that the biologists may teach us, we must be certain that we are dealing with truths that will remain truths for this and for many generations. A point about which there may be any reasonable doubt we may leave for the biologists to settle. We can only accept these facts about which the ablest and most experienced men unanimously agree. Before the simultaneous publication in 1858 by Darwin and Wallace, of their "Law of Natural Selection" biologists believed in the Lamarckian view of heredity, a notable believer being our own Herbert Spencer. Lamarck said: "All that nature has caused individuals to acquire or lose through the circumstances to which their race has found itself for a time exposed, and consequently, through the predominant exercise of certain organs or through a failure to exercise certain parts, it preserves through heredity to the new individuals that are produced by them, provided the changes acquired are common to the two sexes or to those that have produced these new individuals." Thus Lamarck would have accounted for the long neck of the giraffe by supposing that it was at first a short-necked quadruped, that it exercised its neck in browsing off the trees, that the neck elongated in consequence of this use, and that this effect, even so slight, was transmitted, each generation of stretching accumulating until the present condition was established. In this Lamarckian view of heredity and racial change we have two ideas: first, fresh characters may be acquired during an individual's lifetime due to the action of environment; second, these are transmitted to the offspring and produce in time marked racial change. Now the first idea is certainly and admittedly true. We all recognise its truth from every-day experience. The build of a soldier, a clerk, a ploughman, and an athlete is distinctive; the horn upon a mechanic's hand and the muscle in a blacksmith's arm are matters of common observation. The second idea—whether these changes are transmitted—is the rock upon which the Lamarckian boat will flounder; we shall see.

The law of natural selection, brought forward by Darwin and Wallace, may be stated as follows. No two offspring of the same parent are quite the same; they vary often widely. Under the conditions in which they live some of these offspring will, from the very fact that they differ from each other, have an advantage over the rest, and in the struggle for existence will run the better chance of carrying on the race and transmitting their inborn peculiarity. Keeping to the case of the giraffe the history of its development would be as follows. It was at one time advantageous, from the point of view of getting food, for the ancestral giraffe to browse upon trees, therefore those born with long necks and legs would have an advantage over the others, and would in greater numbers survive those with short legs and necks. These would have offspring the average of whose necks would be as long as their parents, but who would again vary, some having longer

and other shorter necks. The ones with longer necks would again have an advantage and produce most offspring and so on. Now there are three ideas in this law of natural selection: first, that there are inborn variations among offspring even of the same family; secondly, that these variations, occurring in surrounding conditions on the whole uniform and common to all of them, will start some with an advantage and others with a relative disadvantage, and that those with an advantage will, more of them, tend to produce offspring; thirdly, that the variations, inborn in this case and not acquired, will probably be transmitted. That there are marked variations—physical, mental, and moral—among a litter of kittens or puppies is within the experience of everyone who has kept them, and that family variations are as marked is known to everyone who has brothers and sisters. Even twins frequently differ considerably from each other. It is said that the last years of the lives of the Siamese twins were sadly marred by their opposing views as to the rights and wrongs of the American Civil War. It stands to reason also that these variations will be of advantage or disadvantage to their possessors, and that among animals and plants, where there are no social props to the weak the variations may and do determine survival. To give an idea of the keen struggle of existence which we find among the lower animals, we have only to enumerate the number of the progeny produced by each pair, which is often prodigious, and knowing as we do that the number of individuals in a species remain virtually the same in a given district for long periods of time together, that the room of the parents is just filled by a younger pair, all the excess of their progeny over and above this one pair must have succumbed in this great struggle. To give one concrete example out of hundreds that might have been selected let us take the case of the golden eagle given by Weismann in his essay on the "Duration of Life." He says: "Let us fix the duration of life in the golden eagle at sixty years and its period of immaturity (of which the length is not exactly known) at ten years, and let us assume that it lays two eggs a year, then a pair will produce one hundred eggs in fifty years, and of these only two will develop into adult birds, and thus on an average a pair of eagles will only succeed in bringing a pair of young to maturity once in fifty years; and so far from being an exaggeration, this calculation rather under-estimates the proportion of mortality among the young." The struggle among the savage races of man must be excessive, and turning to civilised life, do we not find that the sickly, stupid boy, fostered and assisted though he may be, does not have the same chance of success that his stronger and more able brothers have? The third idea in the law of natural selection—namely, that inborn variations are transmitted—is also a fact that is universally admitted not only among biologists at the present day, but by those who trust only to their everyday experience. "The child has its father's temper" or "its mother's eyes" are expressions heard in every nursery, while the innumerable cases of inborn drooping eyelids and supernumerary fingers and toes show the same thing in a more striking manner. The law of natural selection is therefore fact, every bit of it, and no mere theoretical improved fancy. The only question is, How far may this law be applied? One wonders that thinking men had not before Darwin and Wallace's time noticed the operation of this law as bearing upon racial change; but it appears on a careful examination of many of their works that the law was indeed known to many. Malthus understood it, and I find he acknowledges a prior claim to Frankland. Romanes[1] tells us that the idea occurred in 1813 to Dr. Wells, and in 1831 to Mr. Patrick Matthew. If we grant the operation of natural selection as affecting race change—now universally admitted among biologists—there yet remains the question, How much race change has been due to selection:[2] is there also a concomitant transmission of acquired inborn characters (Lamarck's view)? Darwin thought there was; he held that certain racial distinctions were due to the action of the environment of the parents and the transmission of the change thus produced upon their offspring. In his great work upon "The Variation of Animals and Plants under Domestication"[3] he enumerates some of these. They may be divided roughly into two classes: first, instincts and habits; and, secondly, results of use and disuse. Darwin believed that the trained habits of dogs and horses, the tameness of the rabbit and other domestic animals, were due to the direct and transmitted effects of man's contact. He held that the large size of the leg and small size of the wing of the domestic as compared with the wild duck are gradually acquired and transmitted by use and disuse. In order to bring out this point with greater clearness, let me shortly allude to the only piece of pure speculation that I believe Darwin was ever guilty of—I refer to his theory of pangenesis. That he might picture to himself, by means of material particles, the views that he held of heredity Darwin supposed that during their lifetime every cell of the parent disengages small living particles—gemmules—which find their way to and are stored up in the generative cells, ready to develop in the next generation into cells similar to those from which they came. This theory was actually framed to support those cases where Darwin supposed that acquired characters were transmitted, for he says in one of his replies to Huxley's letters:[4] "I do not doubt your judgment is perfectly just, and I will try to persuade myself not to publish. The whole affair is much too speculative; yet I think some such view will have to be adopted when I call to mind such facts as the inherited effects of use and disuse" &c. In the theory of pangenesis the gemmules residing in the body or somatic cells will be subject to such influences as affect the cells and will naturally transmit any change to which they have been subjected to the offspring that they eventually build up. Darwin's view may be graphically represented by Fig 2. Since Darwin's time most biologists have come to doubt whether there is any evidence that acquired characters are transmitted at all, and incline rather to view racial change as altogether due to inborn variations, some of which variations have an advantage over others; Darwin himself, as Huxley pointed out,[5] laid less weight on the influence of acquired habits in his later than in his earlier writings. Modern biologists tend, therefore, to be more Darwinian than Darwin in respect to their thoroughgoing adherence to the action of selective influence; but of necessity they discard his theory of pangenesis, which was a pictorial expression of Darwin's lingering Lamarckian tendencies. Let me give some idea of what the Neo-Darwinians picture to themselves as the "process of heredity." It has been known now for many years that every cell in the body, including the sperm cells and ova, are descended from a fertilised ovum. Of these cells of the body all obviously die except those sperm cells and ova which give rise to the next generation, and so on. We have therefore a continuing chain of actual organic matter linking every living form with those that are most ancestral and remote, and from these chains all the so-called living individuals that have ever existed have, as it were, been thrown off. Many have emphasised this point, Owen, Haeckel and others; but perhaps Francis Galton must be given much of the credit of clearly stating it, though similar views have more recently been popularised among biologists by the delightful pen of Weismann. The "continuity of the germ plasm," the title by which this view is generally known, expresses the fact that germ substance continues in an unbroken line from generation to generation: a man is similar to his parents because he develops out of a similar plasm. The continuity of germ plasm (*stirp* of Galton), like Darwin's selection, is a fact, not a theory. As already stated, both of these facts occurred to many minds; the first could have been logically deduced during the period of Grecian enlightenment, and the second was in our possession as soon as the bare outline of the act of fertilisation had become understood: humanity is for ever the richer by their possession. Now while Darwin's fancy regarding pangenesis compelled one to believe that the effects of disuse and use, the action of acquired disease and mutilation, must be transmitted by the gemmules contained in the parts so affected, the fact of the continuity of the germ plasm leaves the question of these transmissions an open one still. We can imagine that the generative cells within our body are affected by what goes on in our other cells, or that they lie there unaffected, the lymph and blood being, in fact, the only channels of communication between the two; the continuity of the germ plasm does not compel us to accept either view. The fact of the continuity of germ plasm was shortly and precisely stated by Galton in 1875 and by Weismann in his "Studies in the Theory of Descent," published in English in 1882; but since that time Weismann has

[1] Darwin and After Darwin, vol. i., p. 257.

[2] I will henceforth use "selection" in preference to natural selection. "Artificial" is but the natural to us; there can be no such thing as unnatural.

[3] Chapter xxvii. vol. ii. 1875.

[4] Life and Letters. First edition, vol. iii., p. 44.

[5] Life and Letters, vol. ii., p. 14.

speculated at great length upon what I may term the actual process of heredity. His essays, many of them, deal with facts capable of test and verification, and are of a value that it is impossible to over-estimate. All his writing is interesting, and he draws his reader to him by those threads of sympathy that even the scientifically trained mind cannot resist. The speculative part of his work, which in his later writings has come decidedly to outweigh all others, will, however, I fear, prejudice many against the subject. There

FIG. 1.

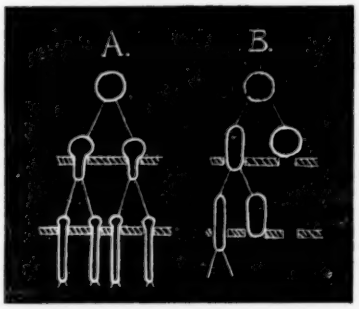


Diagram to illustrate: A, the transmission of acquired characters; B, modification of type by natural selection. In A, an individual of rounded proportions, at the top of the diagram, has two children. Environment is represented by a board with holes through which they must pass. In so doing they become thinner, transmit the thinness to their children, and so on. In B, a man of rounded proportions has two sons who vary, one being fat, the other thin. The fat son cannot get through the hole in the board; but the thin one does, has children who again vary, the thin one having an advantage.

is so much of purely fanciful reasoning, and his views have suffered so much modification, rendered necessary by the discoveries of new facts, that if you turn to him as an outsider, eager to obtain the opinions of a great master upon his own subject, you will be disappointed and will in all probability be rendered profoundly sceptical as to the practical value of the biological position. Permit me

FIG. 2.

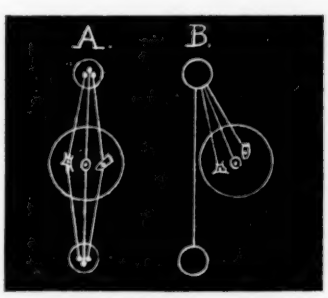


Diagram to illustrate: A, Darwin's theory of pangenesis; B, the continuity of the germ plasm. A. An ovum above, full of gemmules (only three of which are represented), develops into an individual made up of cells, three of which are shown. These cells give off gemmules, which collect and form the substance of the ovum of the next generation. One can see how the gemmules formed by the body cells will be influenced by any change in these. B. An ovum gives rise on the one hand to body cells, and on the other hand to the substance of the ovum of the next generation. A change in the somatic cells does not influence the ovum.

here to explain at some length the nature of these speculations and to justify my own condemnation of them.

In 1883, in his "Essay upon Life and Death,"[6] Weismann looked upon the germ plasm simply as the substance of the germinal cells. On page 148 he defines "germ" as follows: "I should propose to include under the term every cell, cytode, or group of cells which, while not possessing the structure of the mature individual of the species, possesses the power of developing into it under certain circumstances." In 1883 Weismann was a fact man, and the above statement is in accordance with what we know regarding ontogeny, but since that time Weismann has left facts behind and has elaborated the details of this germ plasm from his own fancy. To him it consists of ultimate living particles, to which he assigns various and specific purposes, and groups them at will, group within group, like nests of Chinese boxes. As new discoveries of fact are made by the histologist or embryologist these fancies have to be altered and extended, and his particles have to possess such and such fresh quality. In his last work[7] the theory is brought up to date, and one feels in reading it that the ingenious writer could well adapt his views to any fresh discovery, be it what it may; fancies lend themselves to infinite manipulation, facts are far more difficult to deal with. Speaking in 1883[8] of Darwin's theory of pangenesis Weismann remarks: "We become lost in unfounded hypotheses." I think this is a true and very allowable criticism, but I think that it applies in far greater measure to the hypothesis of germ plasm as developed by Weismann himself. It may be pointed out that Darwin placed little store upon his theory and apologised for its speculative nature, not only in the letters referred to already, but in his work upon "The Variation of Animals and Plants under Domestication," where it appears in a single chapter at the end of a large work of 800 pages. Darwin here says, p. 349: "I am aware that my view is merely a provisional hypothesis or speculation; but until a better one be advanced it will serve to bring together a multitude of facts which are at present left disconnected by any efficient cause." Weismann's own speculations, equally unfounded on fact, are nevertheless viewed by him as being of sufficient importance to demand the most detailed elaboration. Do not suppose for an instant that I am decrying the use of fancy or provisional hypotheses; the world advances intellectually upon the steps (the ruined steps) of hypotheses. The value of a hypothesis depends, however, entirely upon whether we can test it and retain it. If it is intangible, then it remains a hypothesis and the great body of fact workers go on building their sciences, and in the completion of these it has no part. Darwin's pangenesis has no value as a hypothesis, it seems to me, apart from its being a pictorial way of illustrating how use and disuse might be inherited. This is or is not fact which can be and is being tested. Pangenesis is Darwin's way of expressing it, and this is, I believe, how he intended it to be taken. Galton's attempt experimentally by blood transfusion to refute pangenesis appears to have been undertaken under a misconception, for Darwin had only roughly postulated properties of the gemmules in so far as they illustrated his main views. Galton, and afterwards Romanes, tried to catch them in the blood and failed; they might as well have set a trap to catch ghosts. But Weismann's speculative elaboration of the germ plasm is also a useless hypothesis, and, moreover, he lays great stress upon it as a hypothesis. The biphores (his conceived units) have the capacity of growth and reproduction; they are groups of chemical molecules, and therefore far beyond the power of the microscope. We cannot become acquainted with them by any of our senses; they are therefore conceptual, not perceptual. These biphores are arranged in groups (determinants), one for every part of the adult body which is capable of variation; groups of determinants are called ids, and groups of ids are called idants, the last being visible in the ovum as a brightly stained rod of nuclear substance. By the multiplication, differentiation, and disintegration of these various groups the adult body is formed, and Weismann is ready to explain every step. Our criticism of his view is simply this: we cannot test it, it does not assist us, for it merely refers the qualities we observe in men and animals to the properties of groups of chemical molecules, where their qualities are equally without possibility of explanation and still confront us; and, lastly, one has no reason for assuming that living matter is made up of living molecules, but rather the reverse.

Let us see how humanity got the idea of molecules and the idea that things are built up of them. The idea is an ancient one, and it is easy to see how it occurred to thinkers even in primitive times. Most solids, such as chalk, sand, and rock, and fluids, too, and gases, are when broken or divided of obviously

[6] Essays upon Heredity and Kindred Biological Problems. English translation, 1889.

[7] The Germ Plasm: a Theory of Heredity. English translation by W. Newton Parker, 1893.

[8] Lecture on Heredity, op. cit., p. 77.

similar parts. I break this piece of writing chalk across, and each fragment is chalk—that is, it appears to us to be white and hard, it will write upon the board &c. If I continue to break it I shall always have smaller particles of chalk, never anything else. Thus men generalised from their commoner experiences and got the idea that all things are built up of small parts or molecules. Anaxagoras (70th Olympiad), from experiences such as those just described, in all probability arrived at his theory of elements (homœomeriæ), viewing all things as built up of elementary things of the same nature, flesh and blood of elements of flesh and blood &c. Similar views are held to the present day and are an expression of the fact that you can break most things into similar but smaller parts. Quoting from Tait's "Properties of Matter," 1885, p. 21, we find: "But the really extraordinary fact, already known in this part of our subject, is the apparently perfect similarity and equality of any two particles of the same kind of gas, probably of each individual species of matter, when it is reduced to a state of vapour. Of such parts, therefore, whether they be further divisible or not, each species of solid or liquid must be looked upon as built up." It will be noted that the moderns would make a distinction which the ancients did not; a modern will speak of a molecule of a gas or of incandescent iron, but he hesitates before speaking of a molecule of an ordinary solid at ordinary temperature, and would certainly, if an exact thinker, never dream of speaking of a molecule of wood or flesh or bone. If we carefully prepare as perfect a cylinder of wood as we may wish and divide it into two equal parts these (unlike the piece of chalk or iron) will not be the same; the graining will show a difference to the naked eye. The microscope will show that the wood is not uniform in its smallest parts; it is what we may term "organised," the structure being different as we shift the eye along the smallest distance of the thinnest section. The same applies to bone and muscle; in fact, to all parts of the bodies of all animals and plants. The idea, then, of molecule is a conception of an ultimate bit of a substance towards which our experimental breaking has in actual experience partially reduced it, and would never have occurred to the ancients had the commonest objects of nature been, like variegated marble or granite, of obvious heterogeneous structure. When, therefore, we translate this idea to the realm of biology, where bodies are not made up of similar parts, it is obvious that we do this without warrant, in face of our biological experience, and that we are thoughtlessly accepting a physical theory of gases and incandescent solids without appreciating the foundation upon which this theory rests. The fact of the matter is, we are in utter ignorance as to the ultimate constitution of any living matter, but so far as microscopic investigation goes we learn that it has unlike—not like—parts. Our experience, therefore, rather contradicts the belief that it will be found to consist of ultimate parts, each part having the function of living protoplasm, biphores, or whatever name may be attached to them; and we recall Clifford's rule that we may believe what goes beyond our experience only when it is inferred from that experience by the assumption that what we do not know is like what we know.[9]

After this digression let us return to the question, How much can we explain of racial change by selection, and how much must we leave over to be explained by the transmission of acquired characters? Here we are dealing with definite issues which can be settled by observation and direct experiment, and which have been so far settled already as to enable us to state such a conclusion as will safely guide us in further inquiry.

As already mentioned, Darwin was more inclined in his later years to give an increasing value to selection and a less value to the transmission of acquired characters as factors in racial change than he was in his earlier writings. With time and extended experience he was inclined to give even greater emphasis to the latter than to the former. At times he admits that after all selection may account for the effects of use and disuse. Thus in the "Origin of Species" (pp. 117 and 118) we find: "If under changed conditions of life a structure, before useful, becomes less useful, its diminution will be favoured, for it will profit the individual not to have its nourishment wasted in building up useless structure. ..... Thus, I believe, natural selection will tend in the long run to reduce any part of the organisation as soon as it becomes through changed habits superfluous." Galton, as long ago as 1876,[10] is most clear and concise as to this question. He says: "The conclusion to be drawn from the foregoing arguments is that we might almost reserve our belief that the structural cells can react on the sexual elements at all, and we may be confident that at the most they do so in a very faint degree; in other words, that acquired modifications are barely, if at all, inherited in the correct sense of the word." Thirteen years later,[11] during which period he had been a devoted investigator of the facts of heredity and an indefatigable collector of fresh facts, he expresses himself in precisely the same terms.

In 1882 August Weismann[12] questions whether there is as yet any proof that acquired characters are transmitted. On p. 692 he writes: "The theoretical conception of variation as a reaction of the organism to external influences has also not yet been experimentally shown to be correct. Our experiments are still too coarse, as compared with the fine distinctions which separate one individual from another, and the difficulty of obtaining clear results is greatly increased by the circumstance that a portion of the individual duration always depends upon heredity, so that it is frequently not only difficult but absolutely impossible to separate those which are inherited from those which are acquired." Since that time Weismann, in a series of important essays indicating a profound knowledge not only of comparative morphology, but of the habits and modes of life of a vast number of animals and plants, has shown, first, that the cases which Darwin and others have assumed to be those of transmitted acquired characters may reasonably be explained, most of them, by selection; and, secondly, that characters experimentally produced are, as a fact, not transmitted. The gradual increase, generation after generation, in the size of a useful limb or the perfection of a valuable organ of sense may readily be explained by selection alone. The fact that the limb or organ is of use to the race in its struggle will determine the survival of those born with the possibility of growing serviceable parts, and these in their turn will produce others as favourably and more favourably structured than they are, and so on. In this case we may assume the survival of a useful variation and are not compelled necessarily to assume that the used organ transmitted the effect of its usage in succeeding generations. In the same way a species with, say, a large limb or a well-developed sense organ will, under circumstances where these organs are of little or no use, gradually undergo a structural change, resulting in degeneration of the previously useful organ. As Darwin pointed out, a useless organ is an expense and a drain upon an animal's capital: it requires blood, its exercise uses up some of the sum total of energy the individual possesses. Where useless to the species those who have it badly developed, and in consequence have other and useful parts more fully formed, will have a distinct advantage over those who have a well-formed but useless organ. In this way we may explain the smallness of the wings of the tame as compared with the wild duck, a case in which Darwin saw difficulties in the way of excluding inherited disuse. In this manner we may explain the still smaller wings of the running ostrich and apteryx and the rudimentary eyes of the blind fish of the Kentucky Cave and the blind burrowing mole. An animal or man in this respect is like someone with a given capital: if money is spent in one direction there is less for another purpose, so a big leg may mean a small arm, or a good ear be accompanied by an indifferent eye. This is a point upon which direct experimental evidence may be obtained and some such evidence is already forthcoming. Mr. Bland Sutton[13] informs us that if a young person loses an arm by amputation the other arm grows rapidly. He mentions, moreover, the more questionable case of a woman whose big toe was amputated, after which the next one grew to resemble it so much in size and appearance as to be mistaken for it by the attending students. Everyone is acquainted with cases where one kidney or lung can increase in size and compensate for the other lost by removal or disease. When we turn to the question of instincts and habits we find that it is possible to explain on the principle of selection, as Weismann has shown, some at least of the cases which presented difficulties to Darwin's mind. The tameness of rabbits, cats and dogs, which animals have for countless generations been subject to domestication, need not be explained by supposing that the results of taming are transmitted. It is easy to understand that those that rebelled most against man's authority and were by nature least tractable and gentle were less cared for or even killed by him, while the docile

[9] Lectures and Essays, vol. ii., p. 210.
[10] Journal of the Anthropological Institute, vol. v., pp. 344-347.
[11] Natural Inheritance, 1889, p. 14.
[12] Op. cit.
[13] Evolution and Disease, pp. 14, 15.

received his attention and were selected by him to perpetuate the race. That this selection must be going on at the present time is very obvious; savage dogs are continually being destroyed and house-dogs are in most cases selected from those that are docile and of good temper. One that does not possess these good qualities can have no existence in town or village, and so, by continual extermination of the unfriendly, the "friend of man" has gradually been evolved. It must be admitted that there are many cases about which no explanation can be given from the selective point of view, such, for instance, as the effect of climate upon the wool of sheep. In these cases, however, the information we possess is often of a slight nature, so that judgment can hardly be given at present, and all that we can say is that the closer these cases are studied the greater is the number which suffer a ready explanation as being cases which have been brought into existence through selection. This being so, the direct evidence we possess that experimentally induced changes such as the effects of mutilation and compressions of various parts of the body are in no cases transmitted, while we can vary an animal or plant almost at will by selective agencies, points strongly to selection as being the prime producer of racial change, while the direct action of the environment and the transmissions of its effects is of little if any account. Mutilations practised upon male infants by Jews and other Semitic races for thousands of years have still always to be repeated, for the lost parts are reproduced as at the earliest periods of the races' history. Many breeds of dogs and sheep have been for many generations systematically docked, and yet the young are born with as long tails as those of other breeds. Chinese women have compressed their feet from times long back in their history, yet Chinese infants are not born with small feet but have ever to undergo the fresh torture of their compression. More curious still, as affecting an organ of paramount importance, the brain, a certain tribe of Indians artificially flatten their heads in early life, entirely changing not only the shape of the skull but also that of the brain itself, and yet their children are born with rounded heads; the induced change is not transmitted.

We are bound, then, to admit that the thousands of germinal cells lying in the body of the parent are, like other cells of the body, of slightly different constitution—they vary among themselves in size and constitution. They live and are kept alive in the organ where they lie, and the rest of the parent organisms may be mutilated, compressed, suffer change in parts from use or disuse, from climatic or other conditions, and the germ cells rest where they are unchanged. If they develop, the resulting individuals will be what the germs had it in their own nature to be, uninfluenced by changes induced in the body of the parent. But while there appears to be no subtle link between the brain or the hand of the parent and that of the part of the germ cell which may be destined to become brain or hand, the ovum must *live* on something, and that something is the parent's blood. The ovum may be affected, as all admit it to be, by changes in that fluid; its richness or poorness will have a potent effect, and poisons dissolved in it or microbes that float in it will influence the well-being of the ovum. The environment is not, therefore, without action upon the germinal cells, inasmuch as the parent may be thrown by adverse conditions into unhealthy states of body, under which circumstances the tissues, including the germ cells, will all alike suffer from want of nutrition and may suffer if changes occur that are of a positively injurious nature in the quality of the blood. We medical men would sum up the whole subject by saying that a constitutional, but not a purely local, disturbance may affect a germ cell. One man may use his arm and another his leg, and these members will hypertrophy in consequence. The voice may be trained or skill in music or reasoning may be acquired during the lifetime of an individual without affecting the constitution of the body; while, on the other hand, starvation or bad food will impoverish the blood and the whole system, and good food and healthy exercise will enrich the blood and endow it with energy, whilst acquired zymotic disease will produce general as well as local symptoms. In the former cases the germ cells will be unaffected, in the latter they may suffer change, in common with other tissues depending for their vitality, as they all do, upon the general well-being of the body. Both Galton and Weismann clearly draw the line that I have indicated; and when they state that the environmental changes produced in an individual are not transmitted they pointedly exclude those cases where the environment may act directly through the blood upon the germinal cells. We should prefer, in language familiar to us, to sum up their conclusions as follows. Purely local acquired characters are not transmitted, but acquired constitutional conditions may be transmitted (provided the blood and tissues generally share in that condition). I shall term those changes which the germ cell may undergo during their sojourn in the body of the parent, due to constitutional parental change induced by the environment, acquired germinal variations. Those variations of the germs from each other which cause them to develop into the markedly differentiated individual members of a family or litter (no two germinal or tissue cells being alike), I shall term in these lectures "innate germinal variations." We shall see in our further investigation of the conditions under which racial change may take place how important this distinction really is.

Before proceeding further it may be well to bring forward in some detail the evidence in favour of acquired germinal variations as defined above. Whereas we have seen the tendency is strongly in the direction of showing that variation cannot be acquired by the germ as the result of environmental changes in the parent of a local kind, and that all such apparent cases are explainable by selection, the evidence that variations can be acquired from constitutionally acquired parental changes is quite conclusive. Both among plants and animals the change from a better to a poorer food will in the individual lifetime diminish the size of the individual, affect the richness and quantity of the blood and sap, and so modify the size of the germinal cells, which depend for their growth and sustenance upon the blood or sap. By judicious pruning of the roots and branches, and by keeping to the lowest point the nutritive value of the soil supplied, the Japanese can keep down to the height of a tiny shrub the conifer of a hundred years' growth. All its parts, including its germinal cells, are dwarfed by this treatment and would, after having been so dwarfed, have no chance of growth in a normal soil as compared with the seeds of another plant that had been always normally nourished. Lemaire [14] tells us that hemp grows in Piedmont to twice the height that it attains in the less suitable soil and climate of France. If seeds are taken from Piedmont and sown in France they grow to an intermediate height; these seeds are affected and in the next generation they grow smaller still; while in the third they attain to the size of the dwarfed French variety. De Quatrefages tells us of the rapid change in size of horses and oxen when transferred from Brittany to Normandy. In three generations they become distinctly bigger and when transferred back to Brittany they assume the smaller type in about the same time. One could multiply similar instances to show that the size of offspring may vary to some extent with the nutrition of their parents. In respect to qualitative changes in the offspring due to induced qualitative differences in the parents' blood we shall see in the next lecture that some diseases and predispositions to disease may clearly be traced to this agency.

We are now, I think, in a position to make a dogmatic statement of fact, and this statement will, I am sure, be found to be quite complete enough for all practical purposes. We cannot state that in no case does a local change produced by the environment acting directly upon an organism induce corresponding change in the germ cells within that organism. This is a point upon which complete unanimity of opinion is not to be had. We can, however, dogmatically affirm that, while the evidence is here not sufficiently complete to convince a majority of naturalists as to its truth, everyone is agreed that the environment by selection can do almost anything in the way of producing racial change. Of this there is such overwhelming evidence that no one is prepared to dispute it. Selection is by so very far the most powerful factor that the transmission of acquired local characters, if it occurs at all, occurs to so slight a degree and under such special circumstances that, relatively to the other factors, it may be disregarded altogether. Environment may therefore act upon a race in two different ways. In the first case it may give a preference to certain innate qualities of certain members of the race, and so determine the production of the race from these, as when the tallest giraffe will browse best in the herd. In this way a gardener or breeder will in a few generations meet the requirements of the market or flower-show by selecting (so-called artificial selection) as race producers those plants or individual animals which most approximate in innate qualities to those qualities which he wishes to produce. We have also undeniable evidence that the environment

[14] D'Orbigny's Dictionary.

can vary the size and general well-being of a race through the parental blood, and in the same way we shall see that poisons or micro-organisms introduced into the blood may cause qualitative changes in the germ cells which will appear in the individuals which develop from them as disease or as predisposition to disease. This is a position which would, I believe, find acceptance with every biologist, and we shall now have to see how these views apply in the social life we see around us. The time is passed when we need to apologise for applying the statements generalised chiefly from the animal world to man and his conditions of life. Such an application has, of course, to be made with caution, and at most we must look upon these generalisations as giving us a clue to what may be. There is no reason, however, to believe that general truths of heredity applicable to the whole animal and vegetable world should not apply to the one *genus homo*, and if we can find that these do apply it will be to the biologist that we shall owe our thanks for having in the first case indicated them to us. Only since Darwin's time has mankind obtained anything like an approximate idea of the way in which racial change is brought about, for if men dreamed in former times of the elimination of disease and evil dispositions and incapacity, with a view to the betterment of humanity, they had not the slightest idea as to how that change might surely be brought about. They thought that by the transmitted effects of good hygienic conditions, education, and kindly treatment this could be effected, and in that belief, as we have already partly seen, they were profoundly mistaken. The pages of history are full of the stories of vast empires which, starting full of hope and vigour, have crumbled away in time and are no more. We read of these and, maybe, often wonder at the apparent waste—whole races swept away amidst a million hardships, with a bare record of a page or two. We often wonder, too, whether this must be so with us, whether, as with a man, a nation has its allotted time to live. From the biological standpoint we may emphatically affirm that this is not so and that a race may be preserved and developed without catastrophe, without the terrible suffering which we have learnt to regard as inevitable—that we are as everlasting as life itself.

A Clinical Lecture
ON
A CASE OF TUMOUR OF THE LUNG.

BY GRAHAM STEELL, M.D.ED., F.R.C.P.LOND.,
PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY.

GENTLEMEN,—The case which I am going to relate to you was a peculiarly instructive one and presented features of great clinical interest. It was that of a man aged forty-nine years who was admitted to the Manchester Royal Infirmary on Oct. 27th, 1893, for pains in several of his joints of about a fortnight's duration. He made no other complaint than of these pains and he did not appear on admission to be seriously ill. There was only very slight febrile disturbance and this ceased on the administration of salicylate of soda, the joint pains being relieved at the same time. On the routine examination of his chest being made, however, a remarkable state of things was discovered. The whole left side of the chest was dull on percussion and the apex-beat of the heart was slightly displaced to the left, being situated just outside the nipple line. The heart sounds were normal. The vocal fremitus was diminished—annulled, in fact—over the left side. On auscultation there was pure, though by no means loud, bronchial breath sound to be heard over the upper lobe of the left lung, while below breath sound was absent. At no place were any bubbling sounds audible. The patient had a slight cough and expectorated a little mucus. On careful inquiry we found that he had expectorated a little blood mixed with phlegm five or six months before admission to hospital—he thought about two teaspoonfuls. It was noticed that he had several "strumous" looking scars on the neck, and he told us that the sores which had given them origin had occurred only within the last few years. He had never had rheumatism before the present illness. The joint pains were much relieved by salicylate of soda and soon ceased, and the general condition of the patient improved, so that for a time he seemed to be convalescent. Joint pains, although of no great severity, continued, however, to recur from time to time, while the physical condition of the chest remained unchanged. The chest was almost daily examined, but on no occasion were moist sounds audible. Owing to the physical signs in the chest the patient was retained in hospital, and at the end of November he was abruptly seized with severe febrile symptoms, which were attributed to an attack of influenza, which was prevailing at the time No additional physical signs were discovered. The general aching and headache were severe. However, a few days later pericarditic friction sound became audible over the heart, chiefly at the apex. Next day it had disappeared, but the patient was much worse and, indeed, was evidently dying; the fever was high and bronchial effusion was taking place in the right lung, which was œdematous. He died on Dec. 3rd. Before giving you the result of the post-mortem examination of the patient I will try to bring before you in a summary as clearly as possible the broad features of the case as they were presented to us at the bedside. We had (1) the joint pains; (2) the physical signs elicited on examination of the left side of the chest; (3) the "strumous" scars on the neck; and (4) the history of hæmoptysis. I have enumerated these features in the order in which they were revealed to us.

1. *Joint pains*.—These were the only symptoms when the patient was admitted. It was for them that he sought admission. The physical condition of the chest was discovered by routine examination, but it was the discovery of this physical condition which led to inquiries being made, revealing the history of hæmoptysis, and which led to much importance being attached to the scars on the neck. It does not require much experience of clinical medicine to teach us to avoid the popular error of putting down as "rheumatism" any joint pains of which a patient may complain. In this case, while it was difficult to define their true nature, a strong suspicion at least of their not being truly rheumatic was aroused by the age of the patient (forty-nine), an age at which true rheumatism is seldom for the first time developed. Gout seemed to be out of the question, owing to the distribution of the affected joints. There was no affection of the ball of the big toe. Moreover, there were no "tophi" on the ear or elsewhere. The joints were neither red nor obviously swollen. Rheumatoid arthritis or osteo-arthritis, again, did not seem to be the cause of the pains; the joints were not at all deformed. Gonorrhœal rheumatism also was practically out of consideration from the circumstances of the case, and the localisation did not at all suggest it. Lastly, there was pyæmia, but the patient did not seem to be at all gravely ill when he was admitted, and there was no apparent source of pyæmia; the fever was very slight, and till the final attack of illness there was no rigor such as is indicative of a rapid and considerable rise of temperature. The relief of pain by salicylate of soda must not be given too much importance as indicating the rheumatic nature of joint pains, although the result of its administration often helps in the discrimination between rheumatoid arthritis and true rheumatism, the latter being usually relieved by it, the former not at all. Here is a case in illustration of the risk of basing an opinion as to the nature of a joint affection upon the fact that pain is relieved—even satisfactorily and quickly—by salicylate of soda. A patient under my care who had had rheumatic fever more than once was under treatment for dropsy and the ordinary symptons of heart disease. While recovering from these he had pains and swelling in his joints, which, considering his past history, I attributed to rheumatism, and for which I ordered salicylate of soda. The pain was relieved at once, and I was confirmed in my error of regarding the joint affection as rheumatic. However, the tenderness of the congested liver did not subside with the other symptoms of circulatory disturbance. Moreover, the patient was much more jaundiced than simple heart cases with congested liver usually are, and the jaundice persisted. The patient fell into a "typhoid" condition and died without there being any return of the dropsy. Post mortem we found the right sterno-clavicular joint full of pus, and the gall-bladder also the seat of suppuration, set up by the presence of gall-stones. Had the salicylate not speedily relieved the joint pains I probably should have had my suspicions aroused and possibly might have discovered that the tenderness over the liver was peculiarly localised; in short, that it was due to something more than the venous stasis of heart disease. The

case, of course, was one of pyæmia, the source being apparently the suppuration of the gall-bladder, which was in its turn set up by gall-stones. We cannot, then, use salicylate of soda safely as a "test solution" for rheumatism, although it is often useful in this way. It seems probable that rheumatism is due to a micro-organism, and pyæmia is certainly so, and we can understand that a remedy useful in the former may at least relieve the pain and lower the temperature in the latter disease. To return to the case which is the subject of this lecture. I was in doubt about the joint affection being truly rheumatic because, as I have said, the patient was forty-nine years of age and this was his first attack. The liability to heart disease among the subjects of acute rheumatism varies greatly with age, young people very seldom escaping endocarditis. In our patient, supposing him to have had ordinary rheumatism, there was nothing extraordinary in his escaping endocarditis. However, when the pericarditic friction sound became audible I regarded it as confirmatory of the truly rheumatic origin of the joint pains. I am very much inclined, however, to doubt whether both the joint pains and the pericarditis were not really septicæmic. If I only warn you not to jump too readily to the conclusion that joint pains are rheumatic, however likely the conclusion may seem to be, I shall not have related the foregoing facts in vain.

2. *Physical signs.*—Coming now to consider the physical signs presented by our patient let us take the condition of the heart first of all. The apex-beat was slightly displaced to the left, but there was no murmur or other indication of intrinsic disease, while the pleural or pulmonary condition manifestly present seemed to account for the slight displacement of the apex-beat to the left. The whole of the left side of the chest was dull from top to bottom, although the dulness neither transgressed nor fell short of the middle line. There was diminished—rather, annulled—fremitus over the whole of the left side. Over the upper part there was pure bronchial breath sound and over the lower part no breath sound at all. There was no trace of moist sound with the bronchial breath sound, and this statement held true throughout the period during which the patient was under observation. Indications of pressure on the large venous trunks were entirely absent.

Such, then, were briefly the physical signs, and from them and the symptoms already related what was the inference to be drawn? What was the diagnosis of the case to be? Before I saw the patient Dr. Brockbank, our resident medical officer, had aspirated the chest and drawn off a small quantity of serum with a hypodermic syringe, so that from the first I was aware that there was fluid in the left pleura, but I soon came to the conclusion that we had something more than pleuritic effusion to deal with. The history of hæmoptysis and the strumous scars on the neck suggested tubercle. The displacement of the apex-beat of the heart to the left of the nipple line seemed to me to be evidence against the explanation of the absolute dulness, which extended to the supra-clavicular region, by pleuritic effusion alone, and I came to the conclusion that the upper lobe of the left lung was consolidated—notwithstanding the absence of fremitus over it—and the lower lobe compressed by fluid, if not itself more or less consolidated. I was inclined to regard the case, indeed, as one of "fibroid phthisis" complicated with pleuritic effusion, but as time went on and I never heard moist sounds, although I auscultated the patient almost daily, I had considerable misgiving as to the correctness of this diagnosis. Tubercle bacilli were never found in the scanty sputa brought up. I constantly remind you in the wards never to come to the conclusion that you are dealing with a case of simple pleurisy or simple bronchitis without carefully examining for evidence of disease possibly lying behind these conditions. In this case I thought I found evidence of tuberculous disease in the history of hæmoptysis and in the strumous scars on the neck. There seemed to be no indication of pressure by a tumour in the mediastinum; there were, for instance, no enlarged veins. There was, again, no dulness to the right of the middle line at the upper part of the chest. Moreover, the distinct bronchial breathing over the upper lobe of the left lung was opposed to—in fact, negatived—the consolidation, supposing it to exist, being associated with compression of the main bronchus. Complete dulness of a lung, with absence of breath sound and fremitus, is a common result of intra-thoracic tumour compressing the root of the lung, but in most of such cases there are some pressure symptoms, as enlarged veins, to guide us. In this case there were no pressure symptoms; moreover, the bronchi of the upper lobe were manifestly patent, and yet this lobe was absolutely dull on percussion.

3. *Strumous scars on neck.*—The scars on the neck already noticed seemed to be of the ordinary "strumous" kind, which is so common in this region, though their comparatively recent origin was noteworthy, considering the patient's age; but cervical adenitis is met with occasionally in middle age. Two examples have fallen under my notice within the last few years, in one of which strumous spinal disease developed later and proved fatal. The other case was a very remarkable one, and I will briefly describe it. In the spring of 1892 the man, who was about fifty years of age, came into Yates Ward suffering from vomiting and abdominal pain. It was found that he had a very distinct stomach tumour and his vomit contained no hydrochloric acid. There seemed to be no doubt that he had cancer of the stomach. However, under treatment, chiefly by feeding with peptonised milk, his symptoms almost disappeared, and he actually gained a considerable amount in weight; but during his stay in hospital he developed cervical adenitis, the lymphatic glands in the neighbourhood of the angles of the jaw becoming swollen and tender. There was also some febrile movement. This adenitis subsided, and the patient left the hospital very much improved in general health and relieved of his stomach symptoms. I saw no more of him for several months, when he again sought admission to hospital. It was evident at once that he was now very ill—in fact, a dying man. He was emaciated and cachectic looking, and had a large glandular mass at each angle of the jaw, but over the right tumour there was the most perfect "strumous" abscess one could wish to see. I repeatedly remarked at the bedside the typical tuberculous characters of this abscess. You know that the old-fashioned phrase "strumous" may now be translated into tuberculous. In spite of my recognition of the tuberculous characters of this abscess—it was small, superficial, and situated on a mass of solid new growth—I thought it necessary to try to associate the glandular tumours with the stomach tumour which we knew to exist, and it so happened that I had had, several months before, a case of the rare condition, a lymphoma of the stomach, so I was inclined to regard this case also as an example of lymphomatous growth—of lympho-sarcoma. The typical strumous abscess on the neck, however, caused me some misgiving, but I unfortunately did not seek for confirmatory evidence of its tuberculous nature where it might have been found—namely, in the lungs. I had examined the patient's lungs in the spring with a negative result, and did not re-examine them after his second admission. Post-mortem examination proved the stomach tumour to be colloid cancer, and the lymphatic tumours, which were present in the abdomen as well as on the neck, to be tuberculous. There was very early tuberculous disease of the apex of the right lung. Since I have referred to this case I will take the opportunity of relating to you another remarkable circumstance which it presented. In the spring the cancerous tumour of the stomach had been so easily felt that the patient was, one may say, a "show case" in the wards, but on his readmission I could not feel any tumour at all, and it was only several days later that I felt something which I thought must be the stomach tumour. I doubt if it was not merely a fæcal mass which I felt this time. The necropsy explained why the tumour could not be felt on the patient's readmission. The colon had become greatly distended, and occupied the whole anterior aspect of the abdomen by forming a great descending loop of intestine. The stomach tumour was thus thrust upwards and backwards quite out of reach. If one had had more faith in the typical clinical characters of the small abscess on the large cervical glandular mass, and insisted on its tuberculous nature, in spite of the other circumstances of the case, one would have been right in arriving at the double diagnosis of cancer and tubercle in the same individual. I may add that even if the disease of the lung had been detected by physical signs it would not have proved absolutely that the disease was tubercle, for I once had a case in which lympho-sarcoma occurred at the apex of the lung and became excavated. The discovery of bacilli in the sputa would of course have settled the question, but the patient did not expectorate.

4. *Hæmoptysis.*—The patient whose case forms our subject to-day, you will remember, had had a slight hæmoptysis five or six weeks before admission, but the quantity of blood expectorated seemed to have been very small. A history of hæmoptysis, even slight, should always be considered of importance. Of course, tubercle is its most common cause, but it occasionally occurs in malignant tumour of the lung, as, for instance, in the case of excavated tumour of the lung to which I have referred and in which hæmoptysis was the

first symptom. The case is fully reported in THE LANCET of Oct. 27th, 1888.

I will now read you Dr. Kelynack's report of the post-mortem examination of our present case and will conclude by making a few comments upon the explanations of its clinical features, which the results, found post-mortem, afford.

Necropsy.—The body was that of a well-built and well-nourished man. The pericardium contained an increased amount of fluid, with a few shreds of flaky lymph. The cavities of the heart were a little dilated; there was no endocarditis; there was left sero-fibrinous pleurisy. The right lung was congested, deeply pigmented, and crepitant throughout; there was no tubercle or new growth; it weighed 1 lb. 8 oz. The left lung was diminished in size, and compressed by surrounding pleuritic effusion; it weighed 3 lb. 2 oz. On section, the upper lobe was collapsed; the central portion was infiltrated with nodules of soft, white, new growth, evidently of a sarcomatous nature. The lower part of the lung was in a state of acute suppurative pneumonia. The larger divisions of the bronchi going to the lower lobe contained large, white, soft, polypoid masses of new growth, which almost completely obstructed their lumen. The growth was apparently primary in the bronchial glands or peri-bronchial glandular tissue. The mediastinal glands were not enlarged. There was no new growth in the mediastinum. Microscopical examination showed that the tumour consisted of a fibrous stroma, with abundant large round cell infiltration, and was, in fact, a lympho-sarcoma.

Remarks.—This patient, then, was admitted to hospital ostensibly for his joint pains. He made no complaint of chest symptoms, and it was only by our routine habit of examining patients generally that we discovered the physical signs of lung disease that were present. These having been discovered, inquiry elicited a fact to which the patient attached little importance—so little that we should have heard nothing of it without inquiry—namely, spitting of blood. Pressure symptoms, you know, are the great indication of tumour within the chest, but in our patient they were apparently absent. We generally include physical signs when we use the term "pressure symptoms," and if this be permissible in our case then we had a pressure sign—namely, the condition of the lower lobe of the lung, which obviously depended on the obliteration of its large bronchus, a common result of intra-thoracic new growth; but I do not think we could have ascertained this condition during life in the presence of the pleuritic effusion. There is some doubt as to the lower level of the fluid. I am inclined to think it did not extend over the lower lobe and I think one can see in the false membrane of the pleura immediately below the upper margin of the lower lobe a line of demarcation which seems to me to define the lower fluid level. It is quite certain, however, that if the fluid did extend to the base of the pleura it did so only in a thin layer over the surface of the lung and it is almost as certain that the lung consolidation had preceded the pleuritic effusion. The physical signs—absence of breath sound and fremitus, and dulness—were just as explicable by consolidation of the lung with obliteration of its bronchi as by pleural effusion. The slight displacement of the apex-beat to the left was a point in favour of my view. Supposing that the effusion extended to the base, then the only feasible explanation of the displacement of the apex-beat was that the effusion had diminished and was subsiding, an explanation which the extent of the effusion above, it seems to me, hardly bore out; but it is only fair to note that even above the effusion did not extend to the right of the middle line. It is an extremely rare condition to find an effusion limited to the upper portion of the pleura and consolidation of the lung below. Granting in this case that the fluid did extend to the bottom of the pleural cavity, no one can deny that the essential condition present in our case was consolidation of the lower lobe of the left lung with obliteration of its bronchial communication and compression of the upper lobe of the same lung by pleuritic effusion. There can be no dispute as to these two facts. Now, what was the state of the breath sound over the left lung? We had pure bronchial breath sound always over the upper lobe and no breath sound at all over the lower lobe. It is difficult to imagine a more instructive case in relation to the cause of bronchial breath sound over the chest. You know that I hold Skoda's belief with regard to bronchial breath sound in so far as he held it to be the communicated glottic sound. Occasionally, though rarely, we hear the whispered voice over the chest when bronchial breath sound is present; but the whispered voice is the articulated expiratory breath sound and the articulation takes place above the glottis, therefore the possibility of the glottic breath sound being conducted to the surface of the chest cannot be denied. What is the condition which renders this possible? I answer, the consolidation of the vesicular structure of the lung for a certain depth round the bronchial tubes; but such consolidation is brought about equally by compression of the lung by pleural effusion, and by exudation into the air cells themselves, as in pneumonia. In neither of these conditions can there be movement of air in the bronchi of the compressed or consolidated lung; such breath sound as may be heard must be communicated from elsewhere. I say it is from the glottis. If from any cause in consolidation or compression of the lung the patient's bronchial tubes become occluded and this theory be correct, then we should hear no bronchial breath sound. In a case related to you last session I adduced evidence to show you that we may have a "silent" pneumonia[1] from obstruction of the bronchi by tough exudation. This morning I have brought before you a case which, on the one hand, proves that bronchial breath sound may be heard over a pleuritic effusion, provided that the tubes of the airless lung are patent, and, on the other hand, that over the consolidation of the lung no bronchial or other breath sound is heard, provided that the bronchial communication is occluded.

The diagnosis of "fibroid phthisis and pleuritic effusion" was made on the day of admission of the patient; but the entire absence of moist sounds soon threw this diagnosis into question, while the apparent entire absence of pressure symptoms, in the ordinary sense, was evidence against intra-thoracic tumour, had such been suggested. Had the absence of breath sound extended all over the left lung, tumour would have been reasonably suggested, and this, too, notwithstanding the presence of pleural effusion; but the concurrence of bronchial breath sound over the upper lobe and silence over the lower lobe was a condition which I have never met with before in intra-thoracic tumour and one which must be very rare. Its cause in this case—namely, consolidation of the lower lobe with compression of the upper lobe by pleural effusion—must be an equally rare condition. I have stated that the consolidation of the lower lobe by a pneumonic process was really a pressure symptom, although it could not be recognised as such at the bedside. Such consolidation is well known to be frequently associated with intra-thoracic growth compromising the bronchi passing to the affected portion of the lung. From the first the absolute dulness extending over the whole of the left lung, and yet not passing beyond the middle line, together with the slight displacement of the apex-beat of the heart to the left, told of some unusual condition. We knew also from the first that there was pleural effusion present, but evidently this was not all. "Fibroid phthisis" seemed to me, as I have said, to be the most likely explanation. In its favour were the history of hæmoptysis and the "strumous" scars on the neck; but opposed to it were the entire absence of moist sounds over the diseased lung during the whole period of observation—five weeks—and the almost entire absence of cough and expectoration—in short, of lung symptoms. Anomaly of symptoms and signs should always lead us to suspect the presence of some unusual condition or combination, and so make it incumbent upon us to investigate the case as a whole with the utmost care.

NEUROLOGICAL FRAGMENTS.

BY J. HUGHLINGS JACKSON, M.D. ST. AND., F.R.S.,
PHYSICIAN TO THE HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE.

No. VII.

TEMPORO-SPHENOIDAL (LEFT) ABSCESS FROM EAR DISEASE; RIGHT HEMIPLEGIA, WITH LATERAL DEVIATION OF THE EYES AND APHASIA; TREPHINING; RECOVERY.

THERE has been recently under my care in the London Hospital a patient suffering from temporo-sphenoidal (left) abscess successfully operated on by Mr. Openshaw; the abscess was caused by disease of the left ear. There were difficulties in investigating the case, as the patient was deaf in his left ear and did not hear well with his right ear. He

[1] THE LANCET, April 29th, 1893.

was a Dutchman and before his illness did not know English perfectly; when we first saw him he was aphasic; moreover, there was great hebetude. I am very greatly indebted to my house physician, Dr. Percy Langdon Down, for valuable help in the investigation of the case, and also to Mr. Ingall, the house surgeon, for particulars of it after the operation. I will here do little more than give such facts of the case as we thought justified us in trephining the patient.

A man forty-nine years of age was admitted into the London Hospital under my care, on Wednesday, Nov. 15th, 1893. Three or four months previously he "burst a vein" in his left ear, and much blood flowed from it. Five weeks ago he had severe pain in that ear; three weeks ago there was a discharge of matter from it; on Nov. 11th this discharge ceased. So much for the ear disease; now for the symptoms of the cerebral ailment it caused. Two weeks since the patient began to be unable to remember the names of his friends; he gradually got worse in his speech, and also became weak in the right side, arm, and leg; he complained at times of severe pain in his head—pain distinct from the ear-ache. He had had what his friends called "faints" twice; there was no convulsion. He had always been slightly deaf in his right ear.

I saw him first on Thursday, Nov. 16th, at 2.30 P.M. There was hemiplegia of the right side, face, arm, and leg, and his head and eyes were commonly turned to the left, but were not strongly deviated. As is common in cases of aphasia the patient had difficulty in putting out his tongue when told to do so; he only protruded it once, so far as I observed, and I regret that I have no note as to any deviation there may have been on that occasion. He was aphasic, being able to say "no" only; the rest of his talk, so to call it, was an unintelligible series of articulatory sounds; there was great hebetude; his pulse was 52, but regular; there was some degree of hypertrophy of the heart; there was no albumen in the urine (several examinations were made); I thought the abdomen was a little sunken; his respiration was 18 in the minute, more thoracic than it commonly is in a man, but the epigastrium did not sink during inspiration; his optic discs were normal; his temperature this morning was 97·5° F., and I may say by anticipation that in the evening it was 98°.

Thinking it most likely that there was an abscess in the left temporo-sphenoidal lobe, I asked my surgical colleagues, Mr. Waren Tay and Mr. Openshaw, to see the patient. It was agreed that, if his friends consented, he should be trephined on the supposition of abscess in the temporo-sphenoidal lobe.

I saw him again on Friday, Nov. 17th (the morning and evening temperature was the same as on the 16th) and again about 2 P.M. on Saturday, the 18th. Dr. Percy Langdon Down told me on the latter date that the patient's respiration during the night when asleep had been of an ascending and descending rhythm, and thus, although there was no pause, it was of Cheyne-Stokes character; the respiration had not that character during the day following and up to the time of the operation. The patient, when I saw him, was more dull and drowsy. His pulse was 55, regular; the respiration was 20. His abdomen was now much retracted; the epigastrium sank during inspiration, the respiration being entirely costal. He was evidently much further on the road towards death. The morning temperature was 97·5°. There was no optic neuritis.

The patient was placed under chloroform at 2.10 P.M. When well under his eyes were much more strongly turned to the left than before. Dr. Percy Langdon Down drew my attention to this important fact. I asked Dr. Hawkes, formerly my house physician, to observe the patient's pulse during the operation.

The following are the details of Mr. Openshaw's operation. The scalp having been shaved and cleaned with soft soap and ether, and washed in carbolic solution according to Mr. Victor Horsley's direction, the patient was anæsthetised with chloroform. A semicircular flap was cut to the bone from the supra- and posterior auricular regions and turned down towards the pinna. A disc of bone, one inch in diameter, was then removed by the trephine applied one inch and three-quarters above and behind the left external auditory meatus and above the line of the lateral sinus. The dura mater when exposed was healthy in appearance, but bulged markedly into the aperture in the bone; no pulsation was visible, but when pressed upon by the finger pulsation was very feebly palpable. The dura mater was incised across the space, and again upwards from the centre of the transverse incision, so that two triangular flaps resulted, and they were immediately curled upwards and outwards by the brain matter, which at once bulged forcibly outwards. A fine trocar and cannula were then passed horizontally into the brain in a direction inwards and slightly forwards. At a distance of about one inch inwards a diminution of resistance was experienced and the point could be felt free. The trocar was withdrawn, and a small quantity only of the pus having been allowed to escape it was repassed, and both it and the cannula were withdrawn. A full-sized trocar and cannula were then passed into the abscess cavity and the pus allowed to escape. When the abscess was nearly empty a drainage-tube of medium size was passed through the cannula, which was then withdrawn over the tube. The abscess cavity was then washed out with boracic solution through the tube. The dura mater was sutured around the tube, which was brought out through the integumental flap. The skin was sutured with silkworm gut and it healed by first intention.

Mr. Victor Horsley tells me that, on cutting through the dura mater at operations for the removal of cerebral tumour, the pulse always improves. This is one reason for observation of the pulse of this patient during the operation. I now give the facts of Mr. Hawkes' report.

Just before the operation, the patient being under chloroform, the pulse was 42, weak, and unrhythmical. Immediately before the incision of the skin it was 48 and stronger; it kept at 48 whilst the bone was being trephined and was a little unrhythmical. After removal of the piece of bone it was 12 in fifteen seconds, 48 a minute. The dura mater bulged a little, and when it was incised the cortex bulged, the pulse remaining 12 in fifteen seconds; no appreciable irregularity. The trocar was inserted and pus escaped; the pulse was 14 in the first fifteen seconds of this escaping, 16 in the second fifteen seconds (pus still escaping), 18 in the fourth fifteen seconds, and sixteen in the sixth fifteen seconds. When the pulse began to increase in frequency after the pus began to escape it became fuller and was quite regular. Half a minute after the last observation of the pulse-rate it was from 15 to 16 the quarter for the next three minutes. Mr. Hawkes observed slight rigidity of the fingers of both hands from the first of his observations. Up to the last-mentioned observation of the pulse the fingers were always slightly rigid. They now became quite flaccid for about three minutes; the pulse-rate increased to 70 for one minute and then fell again to 17 in fifteen seconds, or 68 a minute. Sutures were now being put in and tightened in the course of two or three minutes; during this time the pulse fell to 16 in fifteen seconds, then to 15 in fifteen seconds and next rose again to 16 in fifteen seconds. When the dressings were applied the pulse varied from 16 to 15 in fifteen seconds, and then fell to 13 in fifteen seconds; it remained at from 14 to 15 in fifteen seconds; for several observations it was 13 in fifteen seconds. (This fall of the pulse was presumably owing to the necessary pressure of the bandages.) When, after the suturing, the head was raised for sponging, the pulse-rate was markedly more frequent for six or seven beats, and then returned to its previous rate; it did not alter in subsequent raisings of the head. The respiration varied from 20 to 24 throughout the time of the operation.

The operation was finished at 3 P.M. At 5 P.M. the pulse was 60, regular, and the respiration was 20. At 9.30 P.M. the pulse and respiration were the same, except that the latter was two more a minute. The evening temperature was 97°. At 9.30 P.M. the patient was conscious, and said "Look here" and "two," holding up two fingers.

The next day, Sunday, the 19th, he talked to his daughter, managing to make her understand; he could not say his name. He asked for "a cup of tea," and said "all right." His pulse was 72 and the respiration was 20, being rather more costal than abdominal. The temperature at midnight was 97·4°; at 4 A.M. and 8 A.M. it was 97°; at noon it was 96°, and at 8 P.M. 97·9°.

Very careful notes were taken by Mr. Ingall of the patient's further progress. I am greatly obliged to him for his precise observations on the pulse, respiration and temperature, things of great moment in prognosis. It will suffice for my present purpose to say that the patient got well without any mishaps. The respiration became more abdominal and less costal. On Dec. 7th the respiration was 24, regular; the pulse was 80, regular. His temperature was subnormal, varying from 93° to 96° until Nov. 25th, when part of the day, midnight, and at 8 A.M. it was normal; but at noon that day it was 96·4°. The temperature was not quite normal after this date until Dec. 2nd, when indeed it was 99°. The last time it was taken, Dec. 4th, it was 98°. The patient left the hospital that day, afterwards coming daily to report

himself or to be dressed. The drainage-tube was not taken out; it was left to be forced out by the obliteration of the abscess cavity. The tube was left out on Jan. 3rd; by Jan. 11th the wound was quite healed. I saw the patient on Feb. 1st, 1894. He looked well. There was no paralysis; he had no headache, and his optic discs were normal. He spoke well and read Dutch fluently; his daughter told us that he read quite correctly. He named articles shown him correctly and promptly, except that he hesitated in naming a pencil, first giving the Dutch word for it. There were no symptoms of importance remaining, none except the slight hesitation in naming just mentioned.

This patient had disease of the left ear, manifested by discharge; as there were also signs of active brain disease (infrequent pulse, costal respiration, retracted abdomen, with the sinking of the epigastrium in inspiration), the question of meningitis or cerebral abscess necessarily arose. Such ear disease—that is, here, bone disease, in effect disease of part of the osseous cranial wall,—when it leads to abscess of the brain, most often produces the abscess either in the temporo-sphenoidal lobe of the cerebrum or in one lateral lobe of the cerebellum—on the side of the ear diseased, of course, in both cases. This patient had right hemiplegia with aphasia, and as the left was the ear diseased it was concluded that if abscess there were it would be found, not in the cerebellum, but in the left temporo-sphenoidal lobe. Mr. Openshaw did find it in the latter position. As I said in the operating theatre, both before and after the operation, it would not be possible for me to negative meningitis with absolute confidence in a case like this. But in any such case, however much we are in doubt between abscess and meningitis, we should, I submit, trephine; even if we think it most probable that there is meningitis we give the patient the chance that we may be wrong in that supposition. Were we to find meningitis the patient would be no worse off, and if there were abscess he would very likely get well.

It is easy to be wise after the event. In cases like that of the one under consideration we ought to consider possibilities and even improbabilities; when at his bedside a certain improbability was thought of. Although the order of events—ear-ache and subsequent discharge from the ear, followed by right-sided hemiplegia with aphasia—pointed strongly to cerebral abscess in the position mentioned, the hemiplegia and aphasia might have been owing to an ordinary—I mean a vascular—lesion, clot, or softening, especially considering the patient's age and that he had hypertrophy of the left ventricle of the heart. The pulse was not tense, the second sound at the base was not accentuated; but then the circulatory system was in difficulties on account of the acute brain disease. There was no albumen in the urine. There was accentuation of the second sound on the patient's recovery.

It does not seem to me desirable to discuss at any length questions of diagnosis from one such case. We must not suppose that the symptoms of this patient were peculiar to abscess of the sphenoidal lobe; the ear disease was what we depended on to point to the nature of the change, to meningitis or abscess; it turned out to be abscess. I may on some future occasion discuss the question of diagnosis more widely, doing so under the general heading, "Diagnosis of Acute and Chronic Brain Disease." I here suggest that in all cases of acute brain disease, abscess, meningitis, and cerebral tumour, we should, for methodical investigation, arrange the symptoms in three orders: 1. The localising—hemiplegia and aphasia in this patient. 2. Those referable to the circulatory, digestive, and respiratory systems—in this patient infrequent pulse, retracted abdomen, too costal respiration, with sinking of the epigastrium in inspiration. 3. Mental symptoms in this patient, great hebetude. We may have the three orders of symptoms in some cases of cerebral abscess, of meningitis, and, it must never be forgotten, in the acute brain disease which occurs in some cases of intra-cranial tumour. Here are good reasons why I refrain from making remarks on diagnosis with reference to but one case. It is to be strongly urged that the symptoms of the second order may occur in all kinds of acute brain disease.

Mr. Hawkes' observations on the patient's pulse during the operation are interesting. In this connexion Mr. Walter Spencer and Mr. Victor Horsley have published some very important researches on the effects of raised intra-cranial pressure in dogs and monkeys.[1] These researches are well worthy of study both by surgeons and physicians.

[1] On Changes produced in the Circulation and Respiration by Increase of the Intra-cranial Pressure or Tension. Transactions of the Royal Society, B. 1891, p. 291.

A SUMMER CLINIQUE IN THE APENNINES.

By W. W. BALDWIN, M.D.

I.

AFTER a twelve years' residence in Florence I spent my annual vacation in Italy, for the first time, during the summer of 1893, at La Traversa. This little hamlet, 870 metres above the sea level, in the valley of the same name, is situated upon the old Grand-Ducal post road, which was the main artery of commerce and travel over the Apennines, between Florence and Bologna, in the days before railways were built. One may take the slowest train (all railway trains are slow, slower, or slowest in Italy) by the new Florence—Faenza line to San Piero a Sieve, and then drive up the mountain, in three hours, to La Traversa; but the drive of six hours from Florence is far preferable. One passes the Porta San Gallo, up through the beautiful Val di Mugnone, between the lordly heights of Fiesole upon the right and Salviati upon the left, crossing then over the wild and picturesque pass of Pratolino down into the Mugello, "the garden of Tuscany." After an hour's level drive in the Val di Sieve, crossing in the meantime the river Sieve, one begins to ascend the mountain by easy grades upon one of the best roads in Italy, reaching Panna in two hours; then, after climbing up over the bold pass of La Furta, the summit of which is the highest point upon the whole road, one descends about 500 feet to our little village, straggling along upon the skirt of that green Alpine-like valley of La Traversa. All the way from Florence the scenery is unrivalled, in my experience, even in Italy, for picturesqueness and variety; but from the valley of the Sieve it grows more and more commanding, until from the summit of La Furta the panorama is indescribably splendid. What lend unspeakable charm to Tuscan scenery are not alone the rich cultivation and the incredible radiance of sunlight in its luminous atmosphere, but above all its amazing wealth in monuments of mediæval art, coloured but not ruined by time: its vast convents and monasteries crowning mountain summits, its castles perched like eagles' nests upon bold crags, its never-ending succession of walled towns and villages always climbing up into picturesque and often into apparently inaccessible heights, its great feudal villas, with clustering hamlets like broods of chickens, its innumerable churches and towers, and huge arched bridges still strong enough to endure centuries of wear and flood. The richer Mugello is the land of the vine and the olive, and its artistic monuments are grander and more extensive than those of La Traversa, which is chiefly grazing country, with large chestnut forests upon the more precipitous mountain slopes; but even this mountain valley does not lack its noble setting of mediæval art. The climate of La Traversa from June until October is temperate and equable, and its air is wonderfully dry, pure and exhilarating. The same may be said, more or less, of all Tuscan mountain resorts, but each has obviously its own advantages and disadvantages, owing to its particular position, as regards mountain protection against the sun and winds. The valley of La Traversa slopes from west to east. From its northern border the great, precipitous granite mountain Massa di Castro rises abruptly over 3000 feet, protecting the valley measurably against the harsh, cool *tramontana* (north wind), and shading it from the early morning sun. The barrier of La Furta hides the afternoon sun at 4 o'clock or 5 o'clock, and tempers or diverts the warm depressing sirocco (south-west wind); while a green mountain barrier to the south cools the heated air rising from the plains of the Mugello. The walled town of Firenzola (Little Florence), five miles, as the crow flies, from our village, lies 1500 feet lower, at the foot of the valley, which here bends abruptly to the right and changes its name. The vast grey mountains of Romagna rise, like an amphitheatre, behind Firenzola, protecting the valley from the full force of the *levante* (east wind). There is plenty of ventilation, however, although the valley is protected by its mountain curtains against the fiercer, long-continued wind storms. Sometimes diverted opposing currents meet at La Traversa, and then the oldest inhabitant can give no name except *burrasca* to the high carnival. The bottom of a deep well would give, perhaps, absolute freedom from wind anywhere in the Apennines. The Alpine-like verdure of this enchanting valley—so rare in Italy—must be attributed

to its abundance of pure spring water everywhere. The station, then, of La Traversa has a longer season than any Apennine summer resorts of greater altitude, and owing to its shade and protection against the heated air rising from the southern plains it is much cooler than most places in its latitude of about the same elevation, the temperature rarely rising in midsummer above 70° F., and the nights are always deliciously cool. These advantages, together with its freedom from long-continued wind storms, the extreme dryness and purity of the air and its temperate climate, would rank La Traversa among the very best of summer sanatoria for all lung cases with feeble circulations and weak hearts, and, indeed, for most chronic invalids of low vitality; but hotels and decent *pensions* are things of the future, and of private houses there are not more than four to let in the whole neighbourhood that are fit to live in. It seemed to me that in such mediæval environment the common folk must still retain some characteristics of their great old race, and exhibit, perhaps, something novel and strange in human nature to a modern student. I had, moreover, long desired to become acquainted with the primitive mountaineers of Tuscany, to learn something of their habits, customs and traditions, to have a glimpse into their character and inner life, and last, but not least, to study their diseases and learn something of their domestic therapeutics and local practitioners. I was told, however, that they were inaccessible to strangers, reticent as to their affairs, and inhospitable to foreign influence and ideas; but a few days after we had settled down to peaceful life in our mountain paradise a fortunate accident opened the door into that *terra incognita*, a priceless opportunity for which I might have worked and waited in vain. My friend and neighbour the Marchese begged me one morning to visit a peasant woman who was thought to be dying from *pulmonite* (pleuro-pneumonia), the most fatal acute disease in this region. We went down at once to the peasant house, against the hill below the castle, a square farmhouse of rough, unfinished, massive stone masonry, with a great, sloping roof. The big door on the right opened into the stables for beasts of burden, cows, sheep, and goats, the smaller middle door leading into the domestic fowl department. From the dazzling sunlight we stumbled through the smallest door to the left, down one step into a kind of big, dusky, witch's kitchen, dimly lighted by a flickering fire of sticks in a great yawning fireplace at the far end, where an old crone was stirring a big pot of bubbling stew, which we afterwards were told was *polenta*, or maize porridge, the digestion destroyer of rural Italy. Somebody showed us up a dark, deep, stone staircase, across a kind of grain room; then, half-tumbling up another bone-breaking stony ascent we entered a chamber, where we could smell much but could see nothing. Lighting a candle we found that the little, square, prison-like window, about a man's height from the floor, had been carefully closed and covered with a heavy old horse-blanket. We had to throw open the window, and the rush of pure, sweet, mountain air into that fetid atmosphere was glorious. We found the patient lying upon the big family bed, where six people slept at night feet to feet. Its condition had better be left to the imagination.

The patient was a spare, muscular woman rather above medium size and about forty-two years of age. Her respiration was shallow, sighing, and about 70 to the minute; the right heart was dilated above two finger-breadths beyond the right border of the sternum, and the second pulmonary sound was hardly distinguishable; the pulse was flowing, compressible and extremely rapid; the extremities, ears, nose, and lips were cold and cyanotic, the skin was clammy, and the face was indescribably anxious, greyish-white in colour, and covered with beads of cold perspiration. The patient could not articulate, the nasal alæ seemed to be paralysed (an evil omen), but curiously enough the hand was steady and her eyes were clear if not bright. "The woman is dying," the Marchese said, and the rattle in her throat rather inclined me to think he was right; but speed, not haste, is the saving clause in such emergencies, and I believe, too, that when the flame of life is flickering in collapse a rude or injudicious hand may put it out, once for all. A hypodermic syringe, with tabloids of strychnine, caffeine, and a bottle of camphor solution, in sterilised oil, were in my pocket; so while I was preparing the instrument the Marchese went up the hill for cognac, and in the meantime our patient was inhaling mountain oxygen from the open window. Hot bricks wrapped in flannel had been placed about the extremities and heart, and the invariable crowd of chattering air-robbers cleared out of the room. Not ten minutes had elapsed since we picked our way through the accumulated stable and house litter in front of the farmhouse, stumbling into the kitchen, before the first subcutaneous injection of caffeine (1 grain) and strychnine ($\frac{1}{30}$ grain) was given. Fifteen minutes later a 20-minim syringeful of camphor solution was injected. This treatment was then continued alternately at half-hour intervals, until reaction was fairly established and the patient complained of muscular cramp. The temperature, which had been 96·2° F. in the rectum at first, was now 97·3°, the pulse had lost its flowing character, and the right heart had contracted to the right sternal border. When it was probable that gastric absorption and digestion had become established, small portions of concentrated food were given, as milk with cognac and beef-tea, every half-hour. Careful directions were given to keep the patient absolutely quiet in a reclining position, to continue to apply the hot bricks and to give nourishment, and under no circumstances to close the window. When I called in the evening she was much better and from this time made satisfactory and uneventful progress to recovery. I purposely omit mention of physical examination and diagnosis because, although one could venture a shrewd guess as to the probable disease, no thorough examination of the chest was made during my first visit.

In the evening it was easy enough to gather the facts of the case and make a careful examination. It appeared that the woman had taken to bed eleven days before on account of a severe stabbing pain through the right shoulder and breast, followed by a severe chill and high fever. The parish medical man was called and diagnosed pleuro-pneumonia, localised in the middle lobe of the right lung. He prescribed ten-grain doses of antipyrin every two hours and five grains of calomel every second day, but with regard to diet the patient continued to feed on sour bread, with an occasional cup of barley coffee or milk, given according to her own whim. Three days later the mischief had extended, and as the temperature was above 105° antipyrin was continued. It was at this period of her illness that I first saw the patient and received, in consultation with the Italian practitioner, the account of her illness, which confirmed the diagnosis of pleuro-pneumonia, though I was unable to agree that antipyrin and calomel had saved the patient's life.

The death-rate in pleuro-pneumonia is so high that the poor creatures resign all hope when they are attacked by it, and if by chance a case recovers they hail it almost as a miraculous event. I would not be thought to depreciate Tuscan parish practitioners in general by thus laying stress on the fatality of a common Tuscan disease, for it is the vital conditions of the patient which entail these untoward results. Many of the physicians are admirably trained in the excellent schools of Pisa, Florence, and Bologna and follow our profession according to their lights with conscientious zeal and devotion. Some of them are men above price—good Samaritans, in truth, who wear their lives out in ill-requited, unremitting toil. To them the poor and suffering are always "God's poor," and their service is rendered with such sweet and gracious courtesy and cheer, such entire self-forgetfulness, that Heaven alone knows what a benediction their example has been. Most of these practitioners are inadequately paid by the communes; all of them have far too extensive circuits, with a population so large that two and sometimes even three physicians would barely serve to do the work satisfactorily now required of one. Under this vicious system it is manifestly impossible that much good scientific work should be accomplished. The dangerous acute diseases will be conscientiously and carefully treated, but chronic diseases and minor complaints will receive scant attention. This region is, therefore, a rich field for the study of diseases hitherto left to the *vis medicatrix naturæ*. A celebrated Tuscan professor of medicine, however, has allowed that Italian physicians, in general, are lacking in attention to details of diet, nursing, and hygiene probably because they know that among their patients, whatever they do, modern ideas of sanitation and cleanliness will be practically neglected.

It is a universal custom, also, among all classes "to assist" at the bedside of the sick, robbing them of rest and air, and demoralising their *morale* as well, by indiscreet chattering and gloomy prognostications. In serious illness the practitioner was in olden times, and is in rural districts even now, expected to hold an elaborate clinical conference at the bedside in order to edify these amateur medical parrots; and in proportion as he delivers himself with volubility and a scientific vocabulary will his reputation rise

or fall in public estimation. This sort of thing is over now, and a large body of clever, hard-working young practitioners, trained in the modern Italian school, will supersede the old-time practitioners.

This case of *pulmonite*, together with a similar but less dangerous one which also recovered, was published from house to house with the usual passionate Italian exaggeration, and the notoriety thus created soon brought me a larger visiting list than under the circumstances was desirable during one's holiday. Thus it came about that in sheer self-defence, after due consultation with the local practitioners, we decided to establish a clinique for the poor. The inhabitants had their dark doubts at first of "il Professore Americano" who proposed to work for nothing and give them medicine upon the same agreeable terms. Who blames them for doubting? From the law-giver to the tax-gatherer everybody takes something from them, always under specious pretext of benefit to the people, more often of economy or patriotism.

If talk were only good for anything, every ill of this unhappy peninsula would have been cured long ago; but nobody ever talks for the people, who suffer and pay in silence. They would be glad indeed for a period of rest and silence at headquarters, where each rise in the eternal tide of talk always raises their taxes and the price of every necessity of life. A shrewd old peasant said to me, "The time will come when fighting will be better than starving." A stock of medicines and various instruments and appliances having been brought from Florence, on Monday, July 24th, we opened our clinique with eight patients. Case 1 was a stout peasant woman forty-five years of age, who had borne twelve children; six of them were living and six had died in childhood from "gastric disturbance." She complained of breathlessness and heart palpitation upon exertion, pain in the back, indigestion, lack of appetite, constipation, excessive nervous irritability, and "deadly weakness." Her menstruation was irregular, but always too profuse, lasting sometimes for fifteen days. She was extremely anæmic. There was no discoverable organic lesion and no leucorrhœa to speak of. She had the usual varicose veins of both legs, caused no doubt, as in the majority of peasant women, by overwork before confinement, and by leaving childbed upon the third or fourth day thereafter to labour in the fields. In cases of this kind one should not be satisfied with anything short of a careful local examination. Nothing of note was discoverable, however, in this instance. It was the usual climacteric disturbance which later experience taught me to expect, as the rule, in women of her age, class, and origin. The treatment was, above all, regulation of the diet and bowels. In this region eggs and milk are of the best and quite as cheap as the vile, half-cooked *polenta*, thin soup with indigestible domestic macaroni, and sour bread with which the people overload their stomachs twice a day. They have, however, a prejudice against milk and eggs as diet. I will here remark that some trouble was taken to teach these people simple elementary methods of cooking milk, eggs, and flour in various wholesome combinations, with such success that by-and-bye we had less difficulty in matters of diet; otherwise our clinique would have been of small service. For the constipation at first compound rhubarb pills were given until the bowels acted once daily, and then gradual substitution of good draughts of fresh spring water in the early morning worked a cure. For the menorrhagia one tabloid of hydrastia murias (¼ gr.), ergotin (½ gr.), and tannate of cannabine (½ gr.) was given three times a day, with signal success. Indeed, this combination rarely failed to relieve uterine hæmorrhage from whatever cause, and it was prescribed in every case of the kind which presented itself at the clinique. Occasionally, however, fluid extract of hydrastia canadensis proved more efficacious, and in a few cases fluid extract of ergotin had to be employed before the passive oozing from relaxed uterine tissues was checked. Nux vomica and tincture of iron were given as soon as possible, and in my notes it is recorded that this patient was discharged as cured on Sept. 4th. Three months later she sent a very satisfactory account of her health. In no case whatever was treatment undertaken without a distinct promise from the patient to obey orders, and upon any wilful violation of the same the treatment was at once discontinued. The details of diet, hygiene, and treatment were generally written out, instructions being given to consult the parish priest in case of doubt or forgetfulness, as he is often the only one in these communities who can read or write.

OPERATION FOR DEPRESSED NOSE.

BY S. K. ELLISON, M R C.S. ENG.

THE hitherto unsatisfactory results of operative procedures in cases of depressed nose has led me to publish the following case.

A woman consulted me in March, 1836, on account of occlusion of the nares and depressed nose. She stated that recently she had had two operations performed, and I learned that one was a Rouge's operation for ozæna and the other a modified Fergusson's operation for raising the nose, which was not a success.[1] I effected an opening into the nares; indiarubber tubing was then introduced, and retained for a considerable time. On reading of the attempts of various surgeons for the relief of this deformity by the insertion of metal, vulcanite, or amber plates it occurred to me that their want of success might have been due to the plates not being perforated, as I had not heard or read of any such plates having been used. I therefore devised a perforated gold plate such as is shown in Fig. 1, which

FIG. 1.

Taken June 1st, 1886, before operation.

I proposed to use in this case. On June 6th, 1886, I undertook the following operation for supplying an artificial bridge to the nose. An incision with a tenotomy knife was made on either side and across the nose a couple of lines below the lower part of the depression (see Fig. 2). The flap of integument thus marked out was raised sufficiently to permit the plate to rest in the position desired on the subjacent tissues. There was very little bleeding, which was easily subdued by hot water. The flap of integument was then drawn over the plate and carefully sutured with horsehair along the line of the incision; a thread of catgut as a drain was inserted in the lower portion of the incision and removed after twenty-four hours.

I found a cleft palate hook of great use in manipulating the flap, thus avoiding the use of forceps at the risk of bruising the integument. Collodion was painted over the line of incision, except in the position of the catgut drain, and a gauze dressing was applied over all. Healing took place by first intention and the sutures were removed on the

[1] Vide illustration from a photograph taken on June 1st, 1886.

fifth day. About two months after the operation a photograph was taken, of which Fig. 2 is a copy. On Dec. 5th, 1893, I communicated with the patient, who now resides in a neighbouring colony; and in response to my inquiry as to whether she had experienced any inconvenience from the gold plate

FIG. 2.

Taken about two months after operation.

introduced by me seven years ago she replied that she had had "no inconvenience from the plate whatever," thus establishing the complete success of the operation.

Adelaide, South Australia.

TWO CASES OF MIDDLE MENINGEAL HÆMORRHAGE, WITH WELL-MARKED BRACHIAL MONOPLEGIA IN ONE OF THEM.

BY H. LITTLEWOOD, F.R.C.S. ENG.,
HON. ASSISTANT SURGEON TO THE LEEDS GENERAL INFIRMARY.

I HAVE thought it might be worth while to put the two following cases on record, as they present some points of interest. The fact that both terminated fatally is an additional reason. Mr. Jacobson, in a valuable paper,[1] which is based on a careful analysis of seventy cases, points out the high mortality in these cases. I am afraid the percentage of recoveries would have been considerably diminished if all the unsuccessful cases had been put on record. Adopting Mr. Jacobson's classification, the first case would, I think, have come into the category of "the less hopeful" cases, and perhaps the second should also find a place there. In the first case the presence of the fracture, the symptoms of concussion, and the well-marked brachial monoplegia made the diagnosis easy. My reason for trephining over the middle of the Rolandic area was that I hoped that the tearing of the vessel might be near this part. Fortunately the skull was thin, so that Hoffman's forceps very easily removed the bone and exposed the bleeding vessel.[2] The hæmorrhage was considerable, so that it was necessary to remove the clot and find the bleeding point. I had no difficulty in doing this. It was arrested by under-running the meningeal vessel on the cardiac side of the laceration—this is a well known method, but often forgotten when the time comes for putting it in practice. I do not think the operation had anything to do with the fatal termination of the case, as the suppurative meningitis appeared to be in no way connected with the exposed dura mater. In the second case the patient died about four and a half hours after the injury, apparently as a direct result of compression. The rapidity of the bleeding was probably due to the size of the vessel torn. If trephining could have been performed, the surgeon would have been confronted with the great difficulty of arresting the hæmorrhage, which would in all probability have been very profuse; removal of sufficient bone, so as to expose the foramen spinosum, would be a very troublesome procedure; possibly ligaturing the external carotid would be the best way of stopping the bleeding in such a case. I have to thank Mr. A. Edwards, house surgeon, for the notes of the first case, and Mr. W. Thompson, the resident surgical officer, for his assistance at the operation.

CASE 1.—A woman aged forty-eight was admitted to the Leeds Infirmary on May 6th, 1893, at 11 P.M., about two hours after the accident, with the following history. Whilst under the influence of alcohol she fell down several stone steps and appears to have remained undiscovered for about an hour and a half. On admission the patient was not absolutely unconscious; she muttered incoherently and made several attempts to vomit. The movements, at times vigorous, of the right arm and both legs were observed; they were somewhat rigid, the legs being drawn up. There was no attempt at movement of the left arm; it was slightly rigid. The breathing was stertorous, the cheeks flapping with each respiration. The pupils were a little dilated and reacted to light. Conjunctival reflex was present. There was a scalp wound about an inch long, situated about an inch below the right parietal eminence; at the bottom of this a fissured fracture could be felt. There was some ecchymosis of the right eyelid and eyebrow. The temperature on admission was 95°F. Thinking the case was one of linear fracture of the right side of the skull, extending from the scalp wound to the orbit, and tearing a branch of the middle meningeal artery, with an extravasation of blood, the maximum amount of which was over the middle of the Rolandic area, I trephined in this region, using a trephine about an inch and a quarter in diameter. As the patient was restless, a small quantity of chloroform was given before beginning the operation. On removing a disc of bone a clot was seen occupying the whole area exposed; some of this was removed with the finger. It was then found that there was free hæmorrhage coming from the anterior part of the opening. More bone was rapidly removed by means of Hoffman's forceps in the direction of the anterior inferior angle of the parietal bone. The aperture in the bone was about three inches long and as wide as the trephine opening. On turning out more clot a torn vessel in the dura mater was exposed. This was apparently the anterior branch of the middle meningeal artery; it was bleeding a good deal. Several unsuccessful attempts were made to secure the bleeding point. The hæmorrhage was arrested ultimately by under-running the vessel on the cardiac side of its division by means of a small curved needle and fine silk. The pulse at this stage became very feeble and rapid; fifteen minims of ether were injected, and thirty-five ounces of warm saline solution were transfused into the median basilic vein by Mr. J. B. Hall, the resident casualty officer. The immediate effect of this was very marked. While this was going on, the operation was completed. The flaps were stitched up with silkworm gut. Two strips of gauze were used for drainage at each end of the wound. Antiseptic dressing was applied. On coming round the patient commenced to move the left arm and appeared to have a good deal of power in it.

May 7th.—The pulse is feeble. The wound was dressed at 7 P.M. There was a considerable amount of blood-stained discharge. She has had diarrhœa all day. She is becoming more conscious. The temperature at 10 P.M. was 100°.

8th.—The wound was dressed and it looks well. The patient is more conscious but very restless. She has taken a pint and a half of milk and half an ounce of brandy. Twenty grains of sulphonal were given.

9th.—She is much improved and can answer questions, and was able to read the headings of the bed-paper. She has taken three pints and a half of milk during the last twenty-four hours. The wound is looking well.

[1] Guy's Hospital Reports for 1886.

[2] I have lately had to trephine a skull which was three-eighths of an inch in thickness, and composed almost entirely of compact bone; in this case Hoffman's forceps were of no use for enlarging the bony aperture.

10th.—The patient is much worse this morning; she is less conscious and very restless. The temperature is 103°. The wound was dressed and no suppuration was to be seen. The dura mater was punctured with an exploring syringe, but no pus was found. Fifteen grains of phenacetin were given.

11th.—The patient is decidedly worse and quite unconscious. Her temperature, which had been 104°, fell to 99° after twenty grains of phenacetin had been given. Later in the day she was quite comatose and died on the next day at 7.50 A.M., about five days and seven hours after the trephining. She had been operated on probably within four hours of the accident.

Necropsy.—The following is an abstract of the post-mortem examination notes made by Dr. T. Wardrop Griffith: There is a linear fracture of the skull extending from a point just to the right of the external occipital protuberance across the side of the skull to the right orbital plate of the frontal bone, and from this across the cribriform plate to the left orbital plate. The fracture did not involve the temporal bone or the great wing of the sphenoid. Some hæmorrhage was found external to the dura mater in the anterior fossæ, especially the left, where also some orbital fat protruded through the fissured fracture. Some of the blood was firmly adherent to the dura mater. The anterior branch of the middle meningeal artery was found secured by a ligature passing round it, but not going quite through the dura mater. On removing the dura mater very extensive suppurative meningitis was found. The brain weighed 42 oz. There was considerable surface bruising of the anterior part of the brain; this was most marked on the under surface of the left frontal lobe. The trephine opening corresponded exactly to the middle of the Rolandic area. There was extensive ecchymosis of the eyelids, but no conjunctival extravasation. The heart showed slight hypertrophy of the left ventricle. The mitral valves were slightly thickened at their margins. The kidneys showed marked chronic interstitial changes.

CASE 2.—For the notes of this case and the opportunity of seeing the post-mortem examination I am indebted to Mr. C. J. Ireland of Tadcaster. A man aged thirty-five, a farmer, was seen by Mr. Ireland on Aug. 9th, 1893, at 11.30 P.M., and died forty minutes later. He was profoundly comatose, the breathing being difficult and stertorous. He was obviously dying. There was a contusion, with slight abrasion, on the left side of the head in the temporal region. The pupils were dilated. On inquiry the following history was obtained. Between 7.30 and 8 P.M. he was finding fault with one of the farm boys; the boy, standing five or six yards away, is alleged to have picked up an irregular stone about the size of a hen's egg and threw it at his master, hitting him on the left side of the head. The man staggered and fell against a wall near which he was standing. He soon recovered his balance and walked into the house, a distance of twenty-five yards. He apparently remained conscious for a time and then rapidly became unconscious, was completely comatose three hours and a half later, and died about four hours and a half after the injury.

Necropsy.—There was a slight abrasion, vertical in direction and about an inch in length, in the left temporal fossa, just anterior to the ear. A good deal of blood had become effused into the tissues of the scalp; this was most marked on the left side. On removing the soft structures from the bone a depressed fracture of the skull was found, triangular in shape, the sides of the triangle being about three-quarters of an inch in length; it was situated in the squamous portion of the left temporal bone, just in front of the ear. A linear fracture extended backwards for about two inches from this. On removing the calvaria a large mass of clot (a teacupful) was found between the dura mater and the bone on the left side, extending into the middle fossa. On removing the brain the depressed fracture could be readily seen, corresponding to the position already described; from the lower part of this a linear fracture was found extending to the base of the skull and going across the foramen spinosum. Very near this a laceration of the trunk of the middle meningeal artery was seen, from which apparently the bleeding had come. No tearing or laceration of the brain could be seen, and the other organs appeared to be healthy.

Park-square, Leeds.

PRESENTATION.—On the 8th inst. the members of the ladies' nursing class which is held in connexion with the St. John Ambulance classes at Cowbridge, Glamorganshire, presented Mr. A. W. Sheperd with Quain's Dictionary of Medicine and a choice silver pen-rack in recognition of the value of his services as instructor of the class.

A CASE OF "LOBSTER-CLAW" DEFORMITY OF THE FEET AND PARTIAL SUPPRESSION OF THE FINGERS, WITH REMARKABLE HEREDITARY HISTORY.

BY A. H. TUBBY, M.S. LOND., F.R.C.S. ENG., &c.,
SURGEON TO OUT-PATIENTS, EVELINA HOSPITAL FOR SICK CHILDREN, AND SENIOR DEMONSTRATOR OF PHYSIOLOGY, GUY'S HOSPITAL.

THE case of a boy aged three years who was seen by me at the Evelina Hospital presented such points of interest that I send an account of it for publication. In so doing I must

FIG. 1.

FIG. 2.

express my thanks to Mr. L. C. Burrell of Guy's Hospital for the great trouble he took in tracing the genealogical history

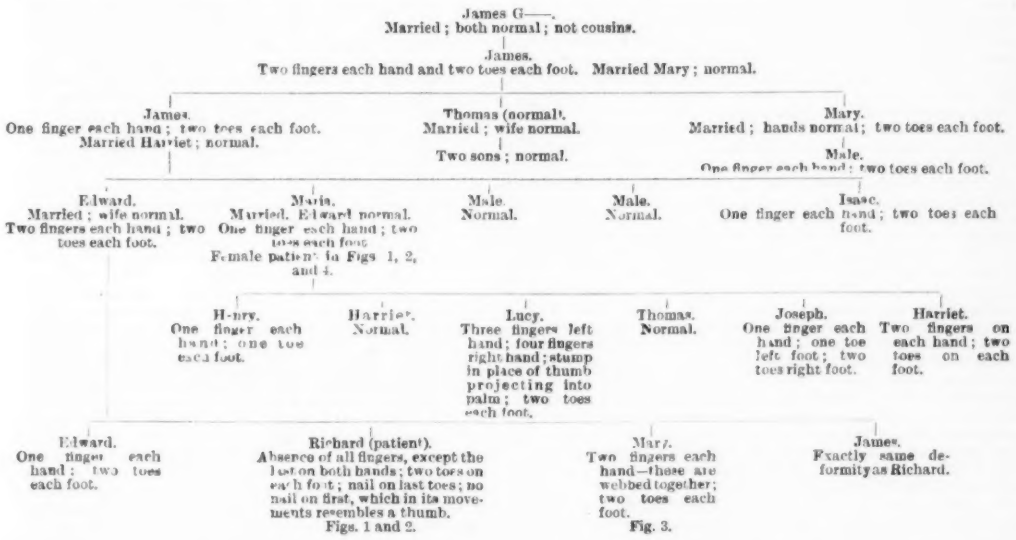
FIG. 3.

of the deformities, and for his kindness in taking photographs. The patient was one of a family all of whom

opposing toe of the quadrumana. (See Figs. 1 and 2.) With this severe deformity the feet were, however, perfectly useful for walking, and in so doing there was no sign of lameness. The hands had but one finger, corresponding in position to the fifth finger, the thumb, first, second, and ring fingers being entirely suppressed, while the metacarpus was normal. In the case of the younger child, a girl, the feet presented

FIG. 4.

the same appearances as in this patient's case, while there were two fingers on each hand webbed together. (See Fig. 3.) Two other children, who were males, were similarly deformed to my patient. An aunt, who brought the child to the hospital, was another example of precisely similar deformity. Her hands are shown in Fig. 4.


James G——.
Married; both normal; not cousins.
James.
Two fingers each hand and two toes each foot. Married Mary; normal.
James.
One finger each hand; two toes each foot.
Married Harriet; normal.
Thomas (normal).
Married; wife normal.
Two sons; normal.
Mary.
Married; hands normal; two toes each foot.
Male.
One finger each hand; two toes each foot.
Edward.
Married; wife normal.
Two fingers each hand; two toes each foot.
Maria.
Married. Edward normal.
One finger each hand; two toes each foot.
Female patient in Figs 1, 2, and 4.
Male.
Normal.
Male.
Normal.
Isaac.
One finger each hand; two toes each foot.
Henry.
One finger each hand; one toe each foot.
Harriet.
Normal.
Lucy.
Three fingers left hand; four fingers right hand; stump in place of thumb projecting into palm; two toes each foot.
Thomas.
Normal.
Joseph.
One finger each hand; one toe left foot; two toes right foot.
Harriet.
Two fingers on each hand; two toes on each foot.
Edward.
One finger each hand; two toes each foot.
Richard (patient).
Absence of all fingers, except the last on both hands; two toes on each foot; nail on last toes; no nail on first, which in its movements resembles a thumb.
Figs. 1 and 2.
Mary.
Two fingers each hand—these are webbed together; two toes each foot.
Fig. 3.
James.
Exactly same deformity as Richard.

presented abnormalities of the hands and feet. In his case the abnormalities may thus be described. The feet, which were nearly symmetrical in appearance and size, gave one the idea of a lobster's claw. The second, third, and fourth toes were entirely suppressed; the great toe was much lengthened, there being two phalanges, but no nail. The fifth toe was also overgrown, and seemed to have three phalanges, while a well-grown nail was found in it. Between these digits a wide sulcus was present, closely similar to that found between the forefinger and the thumb in a normal hand; but the most remarkable point was that the well-developed first toe presented, in addition to the ordinary movements of flexion and extension, the power of opposing itself to the remaining toe, so that in its action and grasping movements it resembled the thumb of man and the

This table of family relationship is very interesting. The deformity has persisted nearly constantly through four generations, and in the later generations is more marked than in the earlier. The ancestors, J. G—— and his wife, were perfectly formed in the hands and feet, while the abnormalities were transmitted indiscriminately through males and females, although in no instance was there any relationship between husband and wife in any one generation. It was not possible to trace any cousinship. The curious shape of the feet is much more persistent than the suppression of the fingers; of twenty-two descendants of J. G——, thirteen had but two toes on each foot, with the prehensile movements of the great toe; one had but one toe on each foot, and one had one toe on the left foot and two on the right foot.

Finsbury-circus, E.C.

ON THE REMOVAL OF FIBROUS OR NASO-PHARYNGEAL POLYPI.

BY THOMAS ANNANDALE, F.R.C.S., &c.,
REGIUS PROFESSOR OF CLINICAL SURGERY, UNIVERSITY OF EDINBURGH.

FURTHER experience in connexion with the treatment of these growths has convinced me that the number of cases in which they can be completely removed by the cautery wire is limited. Owing to their position and their strong and broad attachment to the bone an operation for removal by enucleation and evulsion is the only satisfactory method in the majority of cases. The serious hæmorrhage which usually takes place in such operations has led to the adoption of many proceedings for the exposure and removal of these tumours, but I am of opinion that by a modification of the operation described by me in THE LANCET,[1] the large majority of fibrous polypi can be rapidly and completely removed without serious loss of blood, as it is a well-known fact that as soon as these tumours have been completely torn away from their attachment all bleeding of consequence at once ceases. I have always employed chloroform as the anæsthetic in these operations, and by keeping the head in a dependent position[2]—namely, hanging well over one end of the operating table—I consider that the risk of blood passing into the air-passages is not great. As a result, then, of my experience I submit the following conclusions in connexion with this subject: 1. That unless the tumour is seriously interfering with the respiration during the administration of the anæsthetic, preliminary tracheotomy is not required. 2. That chloroform is the best anæsthetic. 3. That the position of the head should be dependent—that is, hanging well over one end of the operating table. 4. That the following method of operating allows the tumour to be sufficiently exposed and rapidly removed: (α) The anæsthetic (chloroform) having been administered and the head placed in the dependent position the mouth is kept open by an efficient gag. (β) A loop of strong silk is passed through each side of the soft palate, externally to and about one inch above the uvula. These loops are left long and are held by an assistant, so as to steady the soft palate. (γ) The soft palate is then rapidly divided in the middle line with a sharp knife along its whole extent, and through both its layers of mucous membrane, and its two halves are drawn apart by pulling upon the thread loops. (δ) The tumour is now quickly enucleated or separated from its surrounding connexions down to its attachment to the bone with a blunt periosteal elevator, assisted by the finger. (ε) Thereupon, the neck of the growth is seized with a pair of strong forceps close to its attachment to the bone and wrenched or twisted off. If the attachment passes up into the nasal passages this portion will be most readily separated by introducing the same strong forceps through one or other anterior nostril, the working of the forceps being assisted by the fingers of one hand passed up behind the soft palate. (ζ) When the tumour has been thus removed the nasal cavities should be plugged with iodoform gauze and the halves of the soft palate stitched together. The thread loops may be retained until this stitching has been done, as they are useful in steadying the palate; after this they should be removed.

In illustration of the above I record a case recently treated according to these principles. A young man aged twenty-two was admitted into my wards on Jan. 11th of this year. He first began to suffer from obstruction in his left nostril about three and a half years before admission. The obstruction gradually increased and affected the right nostril. For three years he had had attacks of bleeding from the throat. This bleeding took place every two or three months, and on each occasion he lost from three to twelve ounces of blood. When admitted the patient was pale and anæmic owing to the loss of blood; both nostrils were completely obstructed, and when he lay down his breathing was stertorous. An examination discovered marked bulging forward of the soft palate, and when the finger was introduced behind it a lobulated firm tumour was felt occupying the upper part of the pharynx and passing into the posterior nares, to which latter it was firmly attached. Owing to his weak state of health it was thought advisable to give him some tonic treatment, and as he had somewhat improved at the end of twelve days I decided to operate. On Jan. 24th I removed the growth rapidly, and with a loss of not more than a few ounces of blood, according to the method above described. The tumour when removed consisted of three principal lobules all connected at the base of attachment. The whole formed a mass quite as large as a hen's egg. The plug was removed on the second day after the operation, and the stitches in the soft palate were taken out on the thirteenth day, the wound being firmly healed. His recovery was perfect and rapid, and all obstruction in the nasal passage and pharynx was completely removed.

Charlotte-square, Edinburgh.

[1] THE LANCET, Jan. 28th, 1893.

[2] See my paper in THE LANCET of Nov. 8th, 1879, on the Value of the Dependent Position of the Head in Operations upon the Mouth and Throat.

CASE OF TUMOUR PRESSING ON THE SPINAL CORD; OPERATION; DEATH.

BY H. G. TURNEY, M.B. OXON., M.R.C.P. LOND., F.R.C.S. ENG.,
ASSISTANT PHYSICIAN TO ST. THOMAS'S HOSPITAL;
AND
H. H. CLUTTON, F.R.C.S. ENG.,
LECTURER ON SURGERY AND SURGEON TO ST. THOMAS'S HOSPITAL.

A MAN twenty-four years of age was admitted to St. Thomas's Hospital on March 1st, 1893. Twelve months previously he had been in a carriage accident, in which he was thrown heavily and sustained an injury to his back. He recovered from this, but two months later he began to suffer from pain in his back, which at night shifted to his "stomach." A month before admission he noticed weakness of the left leg, followed shortly afterwards by a similar but slighter affection of the right leg. There was no history of syphilis or tubercle, either personal or hereditary. On admission he was found to be a stout, healthy looking young man, complaining of pain in the abdomen and lumbar region and of weakness in the legs. Both lower limbs appeared to be well nourished, though the muscles of the left calf felt somewhat flabbier than their fellows of the opposite side. The loss of power on the left side was moderate, but quite distinct, and affected all segments of the limb in an equal degree. The right leg was thought to be weaker than normal, but the change was so slight that its existence remained doubtful. No objective affection of sensation could be made out, but the patient described his left leg as feeling numb up to the knee. There was no alteration in the temperature of the limbs. Some difficulty was already experienced with micturition and constipation had existed throughout. The deep reflexes were markedly increased at both knee and ankle, the change being greater on the left side. Of the superficial reflexes the right plantar was found to be brisk, the left being absent. Examination of the spinal column revealed no sign of disease whatever, and in all other respects the patient appeared to be in perfect health. At this time, in spite of the lack of outward evidence of bone disease, the definite history of local injury, together with the character of the symptoms, suggested the diagnosis of caries, and on this supposition the patient was kept at perfect rest in the supine position, while at the same time iodide of potassium and mercury were given with an eye to possible syphilis. The pain was certainly relieved by the rest, but it soon became evident that in every other respect the patient's condition was somewhat rapidly becoming more serious. The loss of power in the legs increased until voluntary movement became impossible, and both limbs reached a condition of extreme spastic paralysis. The patient's rest was now constantly disturbed by involuntary movements of his lower limbs, and, though he was insensible to external stimuli applied to the paralysed parts, still he suffered much from pains referred principally to the left leg. On April 10th the condition was as follows. With certain exceptions there was absence of tactile sensation, with greatly diminished perception of pain, temperature and position below the level of the umbilicus; to speak more exactly, the upper limit on the left side was a line running round the body one inch below the umbilicus, while on the right side anæsthesia commenced an inch or more lower down. The border line between abnormal

and normal sensation was very clearly defined, and was not hyperæsthetic. The posterior and outer aspects of the thighs and soles of the feet did not share in the anæsthesia, which, moreover, was less complete on the right side than on the left. The deep reflexes were much exaggerated; the superficial were present and brisk, with the exception of the left cremasteric, which was very difficult to obtain. By May 5th the anæsthesia had invaded all parts of the body below the level just described, with the exception of the outer aspect of the right thigh and some patches of uncertain distribution in the gluteal region.

On May 6th the operation was performed, the diagnosis now resting between caries and a tumour pressing on the spinal cord at the level of the tenth dorsal segment. A long central incision was made over the lower dorsal spines. The eleventh process was removed and the laminæ cut through with saw, chisel, and forceps. The exposed theca did not pulsate, but otherwise presented no abnormality. The bone in front of the spinal cord was carefully examined for caries, but no sign of such disease or of tuberculous swelling was discovered. The spinous process and laminæ of the tenth dorsal vertebra were then removed and the same method of examination pursued, but no disease was found. The arch of the ninth was treated in a similar manner, with the same result. It was now evident that the theca must be opened as a final resource to discover the cause of the pressure which obviously existed. This was accordingly done, and at the upper end of the exposed area in the arachnoid cavity a soft growth was found, extending almost out of sight, beneath the laminæ of the eighth dorsal vertebra. It was placed almost entirely on the left side, with its centre in the situation of the roots of the tenth dorsal nerve, producing a deep depression in the cord. It appeared to be one inch and a half long, half an inch wide, and a quarter of an inch in thickness. It was too soft to be removed in one piece, but was gently detached with forceps and spoon, leaving the pia mater uninjured. The depression in the cord was then more distinctly seen, and another fact was also noticeable—namely, that the posterior roots of one of the spinal nerves on the left side in the centre of the depression had been removed with the growth. Deep sutures of catgut were employed to approximate the fascia and muscle on each side, and silk-worm gut sutures were used for the skin incision. Two drainage-tubes were inserted, one at each side of the incision, as there was a good deal of oozing. The patient suffered a good deal of pain after the operation and vomited frequently during the night. On the following morning (May 7th) he had a rigor, the temperature rising to 103° F. At midday it was found that sensation had returned in the right leg up to the knee. On May 8th sensation was present over the whole of the right leg, the back of the right thigh, and the gluteal region, and also over the front of the right thigh for three inches above the knee and over the right side of the abdomen. On May 9th sensation had returned over the whole of the right lower limb; on the left side sensation was present over the back of the thigh and irregularly over the calf. On May 10th sensation was present over the whole of the left thigh, and the patient was able to move the toes of the left foot. On May 11th he was able to move the toes of either foot; but in the meanwhile the surgical aspect of the case was unsatisfactory. The temperature chart since the operation was of a distinctly septic type; the pulse was rapid and dicrotic, and reddened excoriated patches had appeared over every point of pressure. On May 12th cerebro-spinal fluid was still escaping from the wound, which was now suppurating and surrounded by an erysipelatous rash. The patient at this time complained of acute pain in the head, back, and calves of both legs, and sensation was found to have again been lost over the same parts as were anæsthetic before the operation. On May 13th, though the high temperature and other indications of sepsis persisted, there was some partial return of sensation in the limbs, but on the following day (May 14th) this temporary regain was lost. The patient was suffering excruciating pains in his legs, the muscles of which were now markedly wasted and the seat of constant twitching movements. There was incontinence of fæces and urine, and the general condition seemed to be desperate. The next day, almost suddenly, the abdomen, which before had been flat, became excessively distended, so much so that all movements were abolished. Constant vomiting at the same time set in and continued till the patient's death twenty-four hours later. During the last few hours of life there were spasms of both trunk and limb muscles.

Necropsy four hours after death by Dr. HAWKINS.—The deep muscles of the back were found to be infiltrated with pus, and in addition there were signs of suppuration throughout the length of the vertebral canal, both without and within the theca. After describing the depression in the cord corresponding to the position of the tumour Dr. Hawkins continues his report as follows: "As regards the nerves implicated, it seemed to be clear that the ninth left posterior root ..... was not touched by the depression above mentioned and consequently was probably not affected by the tumour. The tenth left posterior root could not be found; it sprang directly from the depression. The eleventh left posterior root was just implicated. The left anterior roots and both anterior and posterior roots on the right side were certainly in no way affected, though probably they were subjected indirectly to pressure at this level. There was no appearance of tumour tissue anywhere inside or outside the theca. There were no naked-eye signs of myelitis or of column change above or below the seat of the tumour."

The growth on microscopical examination proved to be a myxoma.

Remarks.—In discussing this case from its medical aspect several points of interest in the diagnosis may be noted. The lesion was believed to be due to pressure on the cord from without on account of the early appearance of pain and the unilateral character of the symptoms. The intensity and persistence of the pain, putting aside the youth of the patient, were not such as to suggest malignant disease of the vertebræ; moreover, the absence of deformity or tenderness militated strongly against the existence of caries; and so, affections of the bones being to some extent excluded, the presence of a tumour of the membranes remained as a strong possibility. As regards the level of the lesion the extreme definiteness of the upper border of anæsthesia was as unusual as it was helpful in diagnosis. The explanation seems to be due to the fact that the nerve root was compressed at its origin from the cord and not during its course or at its exit from the intervertebral foramen, as is usually the case; in this way cord and root symptoms appeared to be superposed, so to speak, and as the event proved neither admitted of nor required disentanglement. It will be remembered that on the left side anæsthesia commenced one inch below the umbilicus; a girdle pain had been present at about the same level, but its localisation was not definite enough to throw any further light on the question. According to Gowers,[1] sensation in the region of the umbilicus is subserved by the tenth dorsal nerve. Head[2] places the upper limit of the sensory area corresponding to the tenth dorsal segment at the umbilicus. On the other hand, among the cases of injury collected or reported by Thorburn,[3] lesions at the level of the ninth to the eleventh dorsal vertebræ produced anæsthesia commencing at points varying from two inches above the umbilicus to half an inch below it. Taking the ninth dorsal vertebra as corresponding approximately to the tenth dorsal segment of the cord, this would indicate that the anæsthetic zone produced by lesions at that level lay further forward—i.e., nearer the head—than might be expected from the records of other observers, and also from the evidence afforded by the case now under discussion, particularly as "the upper level of the anæsthesia is generally below the area of distribution of the nerve branch corresponding to the injured vertebra" (Thorburn). In the monkey the level of anæsthesia as shown by Sherrington's[4] results corresponds fairly with those recorded by Thorburn. Thus the area of the twelfth thoracic nerve commences as high as 0·8 centimetre above the umbilicus, and that of the eleventh at a point 2 centimetres and that of the tenth at a point 4·5 centimetres above the same landmark. The apparent discrepancy between the results of experiment and the evidence given by the present case may in all probability, as Sherrington suggests, be due to a more extensive overlap of the sensory zones than could be established by the former method of examination. It must be owned, however, that this supposition, though not negatived, is hardly confirmed by the general disappearance of sensory symptoms after the operation, while the left side of the abdomen remained partially insensitive.

The connexion of myxomatous growth with injury in the

[1] Diseases of the Nervous System, vol. i.

[2] Disturbances of Sensation, with Especial Reference to the Pain of Visceral Disease: Brain, lxi. and lxii., p. 1, 1893.

[3] Jacksonian Prize Essay, 1890.

[4] Philosophical Transactions of the Royal Society, vol. 184 B., pp. 641-763.

spinal canal remains obscure; that there is such a connexion there can be no doubt. Horsley[3] states that of eleven such tumours, there were two with a definite history of trauma. In one at least there were microscopic appearances suggestive of a hæmorrhagic origin. In the present instance, however, such evidence was entirely wanting. From the surgical point of view the final result of this otherwise successful case is most lamentable, for it can scarcely be doubted that this man died from septic infection. All the ordinary precautions that modern surgeons think necessary for success were employed both at the operation and during the after treatment. The details are too well known to require description, and we cannot put our fingers on any particular point of omission, unless it be that the wound was not sufficiently irrigated during an operation which lasted for nearly an hour and a half. Erysipelas, it is true, had been present in the ward and one case developed a few hours after the operation. The eruption appeared on May 12th, six days after operation, and if the case had been entirely satisfactory before this date we might consider that erysipelas was entirely responsible for the result; but the redness, although it was exactly like that of erysipelas, was confined to the back—the area of operation—and might be looked upon as a septic rash.

Notwithstanding the want of success in this most interesting case we have felt it right to publish it in full in the hope that others may profit by our failure, for it is more than probable that complete recovery would have ensued if the misfortune detailed above had been prevented by greater care in procuring asepsis.

THE THYROID TREATMENT OF MYXŒDEMA ASSOCIATED WITH INSANITY.

BY CECIL F. BEADLES, M.R.C.S., L.R.C.P. LOND.,
ASSISTANT MEDICAL OFFICER, COLNEY HATCH ASYLUM.

THE literature of the thyroid treatment for myxœdema has grown apace. Although it is within three years of Dr. George Murray's original communication, there is now a vast accumulation of papers which must be referred to by all who wish to be thoroughly conversant with the subject. Up to the present time there have been recorded about 120 cases of myxœdema as having undergone the treatment either by the subcutaneous injection of an extract of the thyroid or by the ingestion of the gland or a preparation therefrom. In all of them the same remarkable improvement has been stated to follow its use. Having so recently gone into the treatment of the disease from a general point of view,[1] I propose in the present instance to limit myself to pointing out what have been the results of this particular treatment when employed for myxœdema associated with insanity. I hope to show that such cases are equally amenable to the thyroid treatment. There is no need to touch on the mental symptoms occurring with the myxœdematous process and almost invariably present in the advanced disease. Such must be familiar to all. Nor do I intend to give the signs or forms of insanity to which these persons are liable. An interesting account of these may be found in Dr. Hack Tuke's recently published "Dictionary of Psychological Medicine," as well as in other works on lunacy. There is no difference in the treatment of a person with myxœdema who is sane and one who is insane. It is identical, and usually the patient can be induced to take the drug without difficulty. Seeing what had been accomplished in the former, there was every reason to suppose that the result would be favourable in the latter. I must own, however, that the change brought about appears to be even more wonderful; but, after all, the physical condition is *the* disease. It is upon the condition of myxœdema that the mental symptoms depend, and it is in the direction of relieving or curing the primary disease from which the patient suffers that one hopes to restore his or her mental faculties. The mental improvement that has taken place in persons with advanced myxœdema has been what may be shortly expressed as a general awakening. There is increased mental activity. The patient becomes brighter and more cheerful, memory returns and delusions disappear, and all the special senses become more acute, notably the eyesight and hearing. Included in the recorded cases were twelve in which unmistakable insanity was present, the patients being inmates of lunatic asylums. In all these there was amelioration, and in some complete recovery was said to have occurred; but are we justified in regarding these patients as cured? We cannot do otherwise than judge by the results.

First I will mention that of the seven cases published in which thyroid grafting had been performed one was that of an insane person.[2] This was unsatisfactory, like the rest. In passing I may state that the patient under Dr. Collins' care[3] is at the present time in very good health and mentally sound; recently she has been taking thyroid tabloids. The cases in which myxœdema and insanity coexist may be divided into two classes—those in which the insanity follows on the later stages of myxœdema, and those in which myxœdema develops while the patient is insane. In the former of these the insanity is merely a symptom of the advanced disease. All progressed cases of myxœdema show some mental aberration, which tends towards dementia, usually with delusions, the latter taking the forms of suspicion and persecution. Occasionally actual insanity is present in the form of mania or melancholia, and it becomes necessary to have the patient confined in an asylum. In the second class it is quite different. The cases are of far less frequency and do not occur oftener than would be expected if one considers the presence of the two diseases in the same individual as a mere coincidence. I see no reason why such should not exist: why a morbid process should not occur in the thyroid gland of the insane as well as in any other organ of the body. I think there is a strong reason why these two classes should be separated. In the second class one cannot, I believe, hope to benefit the patient in the same way by giving thyroid extract as may be done in the first. It is possible that by improving the bodily nutrition some effect on the mind may be produced, and even a temporary cure be effected, especially in the case of recurrent insanity, but will such be permanent, even with the continual use of the thyroid? It is scarcely to be expected.

It is by no means an easy matter to separate these classes. A person is certified as insane, and not until some months or years after admission to an asylum is the patient recognised as having myxœdema, and then very probably the disease is fully developed. Now myxœdema is almost invariably a very slowly forming disease, and it may have been a considerable number of years since it commenced; but for some reason or other the idea that the patient was the subject of this condition may never have occurred to those in charge, although the patient may have been seen daily. Suddenly one day it is said without a doubt that it is a case of myxœdema. It is a disease, moreover, which is extremely difficult to diagnose in its early stages or of which to say definitely when it commenced. I will take, for instance, some of the cases of myxœdema with insanity that have been published. The man J. T—— had been in Colney Hatch Asylum[4] for five years before the myxœdema was recognised, although from the full note made on admission it is clear that the disease was then well marked. The patient under the care of Dr. Woods at Hoxton House was admitted into that asylum in October, 1891, with insanity of nine months' previous duration, which took the form of mania with delusions.[5] I understand that attention was first drawn to her physical condition by a visit from the Lunacy Commissioners in January, 1893. It was then undoubted. This case shows, too, how a stranger seeing a person for the first time may frequently recognise myxœdema when it has passed unobserved by those in constant attendance. This is of common occurrence. I had an opportunity recently of seeing this patient, and I can say that no one now would recognise her as being myxœdematous—in fact, she no longer has the disease. She was bright and cheerful, with no œdema whatever; she had a beautiful head of black hair and a natural voice; but she was still undoubtedly insane. She was suspicious, and she had a most persistent delusion of being overrun and otherwise annoyed by rats; moreover, she had optical delusions. She had been taking a thyroid mixture for nine months. But the doubt remains whether or not the myxœdema commenced before the onset of the mental symptoms.

[3] Transactions of the Medico-Chirurgical Society, vol. lxxi., p. 411 (circa).

[1] The Treatment of Myxœdema and Cretinism: being a Review of the Treatment of these Diseases with the Thyroid Gland; with a table of 100 published cases. Journal of Mental Science, July and October, 1893.

[2] Edinburgh Medical Journal, May, 1892, and Journal of Mental Science, July, 1893.

[3] The Medical Pioneer, October, 1892.

[4] Journal of Mental Science, October, 1893.

[5] Ibid.

Perhaps after seeing this patient it might be remarked, What is gained by curing the myxœdemata if in the end the patient remains mad? In order to show that this is not the rule I will give some instances. Dr. Ernest Carter reported a case he treated by thyroid injections in Whittingham Asylum.[6] It was that of a female aged forty-three, who had been insane for five years and whose myxœdema had existed for over four years. At the time of publication the patient did not show complete mental recovery, although her bodily change was very great. This lent support to the view that the insanity preceded the other disease—a doubtful point. I have lately heard from Dr. Carter about this patient, and how she has since progressed. He says: "The supply of fresh thyroids failed for a season after my favourable report. During this time the patient lost ground both mentally and bodily, but did not reach quite her former low level. On Aug. 26th, 1892, a young pig's thyroid was split and the halves inserted in an incision under each breast. As an operation this was successful, as thyroid grafting it proved utterly valueless. On feeding with raw thyroid being introduced the patient was put on a raw beef sandwich every day for six weeks as a check experiment. This gave no results, and she was allowed to continue *in statu quo*. On April 21st, 1893, she took five grains per diem of a dried extract of the thyroid in powders. After five weeks she was found to have lost so much weight that the dose was given on alternate days only and an iron mixture prescribed. Under this she has been steadily improving and is now rather better than I have seen her before in every way. So well, indeed, has she been that it was thought that a fortnight's holiday at home without intermitting the powders would be quite feasible, especially as patient was very anxious to go. The anxiety of her relatives does not appear to be reciprocal, and she remains with us much quieter, though occasionally excited, and without any of the physical characteristics of her former condition."

Now I will take a more acute case and see with what result the treatment was followed—I mean where the insanity came on suddenly in a person who had been myxœdematous for some time. One cannot do better than take the case Dr. Melville Dunlop has published.[7] It was that of a lady with advanced myxœdema of twelve years' duration, by which she was completely invalided and where acute mania supervened suddenly so that it was necessary to place her under the care of special mental nurses. A few months later thyroid feeding was commenced. After a four months' course she was *cured* and could not be recognised by her friends. I may mention that there was a strong family history of myxœdema, but insanity was not hereditary. This lady is at the present moment in perfect health, both mentally and physically. Dr. Dunlop has been good enough to write to me concerning her case, which is well worth quoting: "The patient went on steadily improving ever since the treatment by thyroid feeding was commenced. Although I have had a large number of cases of myxœdema under my care, in no case have the results of treatment been more striking than in this lady. When the treatment was begun in October, 1892, she was reduced to the last stage of the disease, and I hardly expected her to live many weeks, the excitement was so intense and her general condition so weak. I had on that account great hesitation in subjecting her to treatment. The improvement, however, was most rapid, and she has never at any time had the least recurrence or relapse of her mental symptoms. She is a remarkably clever woman and is again as intellectually inclined and as active a member of society as she ever was, which is very wonderful, considering the length of time the symptoms had lasted." There is no need for me to comment on such a case, and there can be no two opinions as to the results obtained.

An equally satisfactory case is that reported by Dr. Hamilton Marr from Woodilee Asylum—that of a woman aged fifty-one, whose mental aberration dated from Christmas, 1887, and whose bodily weakness commenced three years previously.[8] She was subject to attacks of great violence, with intervals of depression and moroseness. She was discharged from the asylum, so Dr. Marr informs me, about the end of September last, *recovered*, after seven months' thyroid feeding with the raw gland and a glycerine extract. Dr. Marr goes on to say that "since that time I have received a letter from her which is well written and well expressed. She states that she now feels quite well in mind, and her statement is borne out by a medical man who is looking after her. She continues to take the extract, though in smaller doses; one drachm of a glycerine extract (a gland to two ounces) is sufficient for her well-being." Dr. Marr tells me, also, of a case of myxœdema in the Crichton Royal Institution, Dumfries, which is progressing favourably in all respects, and especially mentally, under feeding with thyroid glands. I have said that one could scarcely expect to see the same benefit from the treatment where the insanity was primary and of old standing, and yet see what has been the result in Dr. Claye Shaw's case, which appears to be one of this kind. This was that of a woman thirty-three years of age, who had been the subject of recurrent melancholia for ten years, and who had only shown signs of myxœdema for about four years.[9] She was discharged from Banstead Asylum as "cured" on July 8th, 1892, after a two months' course of thyroid treatment. My thanks are due to Dr. Shaw for enabling me to state that she remains quite well by occasionally eating a gland or two. What better result could we possibly wish?

The frequency with which myxœdema is now seen is quite astonishing. Can the more ready recognition of the disease entirely account for this? Another case has lately been admitted into Colney Hatch Asylum, making the sixth in this asylum during the last two years and the fifth under the thyroid treatment. She has been treated by my colleague, Dr. Ewart, and is now about to be discharged, having recovered. It would be interesting to know whether other institutions of this nature possess as many cases of myxœdematous insanity. The patient whose photograph was reproduced in the *Journal of Mental Science* remains in very good health, and her mental faculties continue to be clear. It is eighteen months since injections of thyroid extract were commenced, and she is now given a thyroid powder at intervals of two or three weeks.

The effects of the treatment on the thirty cretins that have undergone it are truly remarkable. The failures have been very few, and it may be that in those cases a sufficient quantity of the drug was not given. Dr. Wallis Ord, in his recent paper,[10] has shown that equally large doses of the thyroid can be borne by infants without ill effects as have been employed in the treatment of adults. Where no improvement has taken place the children have usually been what are called semi-cretins.

The thyroid treatment has now passed beyond the experimental stage—it is an established fact; but it has been clearly proved that the thyroid must in one form or other be continued indefinitely, or at least until some better means of transplantation have been devised. After all, what is it for a person to take a daily dose of a few minims or grains of the drug, or it may be a little larger quantity at a longer interval? The prolonged use of the thyroid in this way is known to be harmless, for there are persons now in excellent health who have taken it on and off for nearly three years. To my mind it is, indeed, cruel to see persons who have been restored to mental and bodily health allowed to relapse into their myxœdematous condition solely for the want of the continued use of the drug. In conclusion, I would say to all those who are now treating patients, or in future propose to do so, Do not commence to give the thyroid unless you are prepared to persevere with it.

[6] Brit. Med. Jour., April 16th, 1892.
[7] Edinburgh Medical Journal, May, 1893. Case 2.
[8] Glasgow Medical Journal, August, 1893.
[9] Brit. Med. Jour., Aug. 27th, 1892.
[10] THE LANCET, Nov. 4th, 1893.

INSTITUTE OF CERTIFICATED SANITARY INSPECTORS.

At a general meeting of the members of this institute, held at the Parkes Museum on Jan. 31st, Mr. Wynter Blyth, president, being in the chair, it was unanimously resolved that a representation be made to the President of the Local Government Board with a view of ensuring consideration in the Local Government (England and Wales) Bill of certain matters which the members of the society have at heart. These matters may be summarised as follows:—1. That the term "inspector of nuisances" be abolished through the provinces and that "sanitary inspector" be used in place thereof. 2. That in the interest of public health it is advisable that permanency of office and some provision for the superannuation of sanitary inspectors be made. 3. That a clearer definition be given of the position and duties of such officers than that contained in the general orders of the Local Government Board.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

UNIVERSITY COLLEGE HOSPITAL.

PERFORATION OF BOTH PLEURÆ; IMMEDIATE CLOSURE OF THE WOUNDS; RECOVERY.

(Under the care of Mr. BILTON POLLARD.)

WOUNDS of the pleura by a fragment of a broken rib are very frequently met with in surgical practice, but penetrating wounds of the pleura without any injury to the other contents of the thorax are very rare. Mr. Pollard's case is of considerable interest, not only from the fact that both pleural cavities were opened and yet the child recovered, but also from the observations made as to the behaviour of unwounded and healthy lung when free access of air is permitted to the pleura. When in cases of double empyema incisions have been made into both collections a fatal result always ensues unless there are already adhesions to prevent collapse of the lungs. The chief indications for primary treatment are to arrest hæmorrhage, to secure perfect rest, to render the wound antiseptic, and to remove foreign bodies and the torn and lacerated edges of the wound (for not only may these have dirt ground into them, but they might slough in consequence of the damage received and prevent primary healing). The extent of the wound must be gauged rather by the history of the injury, the anatomical conformation of the part, and physical examination than by probing. The treatment of the complications of these wounds, especially the treatment of hæmorrhage, has undergone much improvement of late years, and there are many cases now on record of recovery of the wound of the lung due to gunshot &c. which appear almost marvellous when compared with the results formerly obtained.

A strong healthy boy aged two years and seven months was, on Aug. 10th last about 6.40 P.M., playing on a sofa near an open window on the top storey of the house when he accidentally fell out, and after a descent of thirty-five feet became impaled on the corner of the area railings. He was immediately lifted off by a passer-by and carried directly to the hospital—a distance of from 200 to 300 yards. He was very collapsed and his radial pulse was almost imperceptible. Air was rushing in and out of both pleural cavities with a loud gurgling noise. Blood was spurting from a wound in the left side of the thorax and was trickling continuously from a wound in the right side. Both wounds were at once covered with a gauze and wool dressing in order to limit the entrance of air into the pleuræ as much as possible. An enema of warm brandy-and-water was administered, and the child was wrapped in a warm blanket. Mr. Pollard decided to close the wounds. The operation was commenced at 8 P.M. No anæsthetic was given. The wound in the left side of the thorax was three inches long and extended nearly horizontally outwards from a point about two inches from the spine opposite the seventh and eighth ribs, both of which were broken in at least two places. The wound in the right side of the chest was two inches and a half long, and extended nearly horizontally outwards from a point two inches outside the border of the sternum; it penetrated into the fifth intercostal space. No ribs were broken. There was another wound two inches and a half in length which exposed the lower part of the sacrum and the rectum in the ischio-rectal fossa, but both of them were uninjured. The temporary pads were first removed from the left side, those on the right side being carefully supported against the chest. At the instant of removal three fingers were inserted into the wound as far as the knuckles. The lung was found to be retracted, and almost the whole of its costal surface could be explored with the fingers: it was uninjured. Some blood-clot was removed from the pleural cavity, and as the hand was withdrawn the lung was forced into the wound during an expiratory effort. The bleeding referred to above had ceased. The edges of the wound were now pinched up (just at the moment when as much air as possible had been expelled by expiration) and clamped between the thumbs and fingers of both hands, one at either end of the wound, in such a manner that, whilst the opening into the thorax was completely closed, the actual edges of the wound in the skin and subcutaneous tissues projected well beyond the fingers. Whilst held in this position all bruised shreds of tissue were cut away and the edges of the wound, after being disinfected, were brought into accurate apposition by means of silk sutures. An antiseptic dressing was applied and held firmly against the wound whilst the wound in the right side of the chest was being dealt with in a similar manner to that just described. Finally, the wound over the sacrum was disinfected, sutured, and dressed with wool and collodion. The child was very collapsed, and showed but little evidence of pain during the operation. Two drachms of brandy were administered by the mouth before he was removed to the ward. At 11 P.M. the boy was conscious and his feet were getting warmer. His lips were decidedly blue. The respiration was 68 per minute and the pulse 164. Half a drachm of brandy was ordered to be given every two hours. The child slept at short intervals during the night. On the following morning the shock had completely passed off. The respiration was 70 per minute and very shallow; the pulse was 166 per minute and very feeble. Liquid nourishment was readily taken. On the second day after the accident the child was much brighter, but his temperature, which had been steadily rising, was 103° F. On the third day the wounds were dressed, and both chest wounds were found to be healing without inflammation. During expiration the lung beneath the wound on the left side of the chest protruded beneath the skin opposite an area of 2×3 inches, but the union of the wound was firm enough to prevent its edges being forced apart. Such air as had been unavoidably left in the pleural cavities had been absorbed and pleuritic friction was audible for some distance around each wound. The edges of the wound in the sacral region were inflamed. The stitches were removed and the wound was torn open and left to granulate. The chest wounds were dressed again on the seventh day and found to be united and free from inflammation. The frequency of the respiration had fallen to 50 per minute and the dusky pallor of the child's lips had given place to a healthy tint. The frequency of the pulse and respiration diminished and the temperature fell gradually. On the eleventh day the respiration was 36, the pulse 116, and the temperature from 100·4° to 101°. Effusion had taken place in the right pleural cavity, and in the sitting position the fluid reached as high as the angle of the scapula. On the twelfth day the first symptoms of measles appeared. There was some bronchitis and the child coughed frequently; but neither of the chest wounds suffered. The rash had entirely disappeared on the twenty-sixth day. The respiration had by this time fallen to 21 and the pulse to 94. By the thirty-first day all bulging at the site of the wounds had ceased, and the broken ribs appeared to be firmly united. The chest was resonant to the bases of the lungs on both sides. The temperature had been about normal since the seventeenth day after the accident and the fifth day after the onset of measles. The patient was discharged on the thirty-third day after the accident. He was seen about four months later and was then found to be quite well.

Remarks by Mr. BILTON POLLARD.—Paradoxical as the statement may appear to be, the little patient whose aerial adventure and its consequences are above described was fortunate in alighting on the spikes of the area railings, for, if he had missed them and had fallen on the pavement with the momentum gained by a descent of thirty-five feet, it is inconceivable that he could have survived. It was at first rather difficult to explain the position of the wounds, for one, the largest and most severe, involved the left side of the chest near the spine, whilst the other implicated the right side near the sternum. The boy is described as having revolved two or three times in his descent, and as having struck the corner of the railings where there is a larger and more prominent spike. He appears to have alighted on this spike, which penetrated the back of the left side of his chest, and then the force of his descent appears to have rotated him about this point until the front of the right side of his chest struck the next spike, which was smaller or less prominent. That the boy escaped immediate death from asphyxia may be explained thus. The wounds were so free and of such a shape that the air escaped from the pleural cavities during expiration as readily as it entered during inspiration, and that

consequently the lungs, though retracted, were not compressed by the air in the pleural cavities, as they would have been if the wounds had been such as to favour the entry more than the exit of air. Though the wounds were very free, the entry of air into the chest was to a certain amount impeded—at first by the child's clothes and later by the pads which the house surgeon applied—so that the inspiratory efforts, whilst they did draw air into the pleural cavities, still drew sufficient through the respiratory passages into the lungs. It is unnecessary to refer to the treatment adopted, for it is obvious that, since there were no adhesions between either lung and the chest wall, the only chance of survival lay in immediate closure of the wounds. By the method adopted in doing this the air left in the pleuræ was reduced to a minimum, and that was quickly absorbed. Effusion only occurred on one side, and that was fortunately absorbed without suppuration occurring. Impalement on spikes is always a most serious and generally a fatal accident, and perforation of both pleuræ in this way is rarely recovered from. In "Holmes' System of Surgery" a case is referred to in which a man recovered from perforation of both pleuræ caused by the shaft of a chaise, which was forced between the ribs on the left side, through the cavity of the thorax behind the sternum, and made its exit between the ribs on the right side, without injury to the heart, lungs, or large vessels.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.

TWO CASES OF HERNIA OF THE FALLOPIAN TUBE.

(Under the care of Dr. MORTON and Mr. BUTLER.)

THE rarity of hernia of the Fallopian tube leads us to record the following cases of femoral hernia, recently treated at this hospital, in which the Fallopian tube was included in the contents of the hernial sac. Dr. King[1] records an instance of the very rare condition of congenital inguinal hernia of the uterus, left tube, and ovary. A radical operation was performed, and the patient died from cardiac failure on the fifteenth day. References to the condition are to be met with in writings by Lavater, Voigt, Aubry, Ferè, and Brunner.[2] The condition appears to have been first described by Bessier, and has only been met with in femoral and inguinal herniæ. There are several cases mentioned in English literature of inclusion of ovary and even of uterus in hernia, but none hitherto of inclusion of the extremity of the Fallopian tube. For the notes of these cases we are indebted to Mr. Charles Frier, house surgeon.

CASE 1 (under the care of Dr. Morton).—A woman forty-six years of age sought advice at the out-patient department of the Royal Surrey County Hospital on account of a swelling in the right groin. She had had a swelling there constantly for two years, and it had suddenly become larger five days before she attended the hospital. There had been no action of the bowel for five days. The swelling was tender to the touch and gave the impression of an inflamed gland softening in the centre. A simple enema was administered and produced a considerable evacuation. Four days later an incision was made over the swelling through tissues which were of almost cartilaginous density. This exposed a rounded, grey, translucent mass, which looked almost like the colon, but was in reality the thickened sac. On opening the sac a small quantity of coffee coloured fluid escaped. The sac contained some omentum and an irregular, varicose-looking mass, attached to one end of which were some congested papillary projections. These latter proved to be the Fallopian tube and its fimbriated extremity. The tube and omentum were returned and the sac was ligatured and cut away. The wound healed by first intention.

CASE 2 (under the care of Mr. Butler).—A woman was admitted to the Royal Surrey County Hospital suffering from a strangulated right femoral hernia, which had been down for five weeks. The symptoms of strangulation were of a fortnight's duration. A simple enema produced a copious evacuation, and this was followed by a copious natural evacuation some hours later. Herniotomy was performed, and the sac was found to contain gangrenous omentum and gangrenous ruptured bowel. The peritoneal cavity contained a large amount of fæcal matter, apparently mixed with pus. The gangrenous omentum was removed and an artificial anus made, but the patient died from shock twelve hours later. At the post-mortem examination the bowel was found to be ruptured about eighteen inches above the ileo-cæcal valve. The omentum, small intestine, and cæcum were all much matted together, and glued to the surface of the mass so formed was the end of the right Fallopian tube, which was gangrenous to the extent of about half an inch, having evidently been caught in the constricting band. The vermiform appendix was apparently healthy, although the finding of an orange pip in the peritoneal cavity had given rise to a suspicion that the appendix might also be involved.

[1] Sajous, vol. ii., 1891, F. 58. American Journal of Obstetrics, New York.

[2] See Macready on Hernia.

HULL ROYAL INFIRMARY.

IMPERFORATE ANUS, WITH RECTO-VAGINAL FISTULA, IN A PATIENT NINETEEN YEARS OF AGE.

(Under the care of Mr. HENRY THOMPSON.)

THE variety of imperforate rectum of which this case is an example—namely, that in which the bowel communicates with the vagina by an opening in the posterior wall—is, of all, the most favourable. There is less risk to life and also a greater chance of effecting ultimate cure. Mr. Cripps gives twelve cases, in eleven of which recovery followed operation. He recommends that where possible operation should be postponed to allow the parts to thicken. Dr. Karl Abel[1] records a case somewhat similar to this in the *Archives of Gynæcology* (New York) the year before last. It was that of a young woman twenty years of age, who from birth had passed her motions through the vagina. The rectum opened into the vagina slightly in front of the fourchette. A serviceable sphincter was present, and the woman had as good a control over her fæces as if the arrangement had been normal. For the notes of this case we are indebted to Mr. Sutcliffe, house surgeon.

The patient was sent to the Hull Infirmary by Mr. Calvert of Beverley on Sept. 25th, 1893. The mother stated that the girl was a week old before the nurse found out that there was any malformation. When five or six weeks old Mr. Thompson of Beverley "tried to make a proper opening," but failed to do so. When fourteen months old she was brought to the Hull Infirmary and examined. Nothing was done, but the mother was advised to bring her again when fourteen or fifteen years old. During the whole of her life of nineteen years the girl has never had control over defecation, but during childhood she had relief without the administration of an aperient, although the mother stated that up to admission to the Hull Infirmary she had never known her to pass a "formed" motion. Seven or eight years ago she began to suffer from attacks of "sickness and purging." At first these attacks only occurred at intervals of three or four months, but latterly there had been only, as a rule, an interval of a month or so. During these attacks she had stercoraceous vomiting and constant passage of fluid motions. The patient had never menstruated, but she had always been an active, intelligent girl, and she had attended school regularly in spite of her inconveniences. On admission to hospital the patient was an ill-developed girl, looking more like thirteen than nineteen years old. No trace of anus could be seen, but there was the mark of a cicatrix on its proper site; the hymen was absent and the vagina capacious. Just within the vagina and on its posterior surface there was a round aperture through which the tip of the first finger could with difficulty be passed into the rectum. The latter was felt to be loaded with a huge accumulation of fæces, which probably extended through the whole of the large intestine. The cushion between the finger introduced into the rectum and the external skin opposite the proper site of the anus was about an inch in thickness. Ether was administered, and the house surgeon, after two hours' hard work, by means of injections, &c., apparently to a great extent cleared the rectum and lower bowels through the vaginal fistula. Nothing further was done at that time on account of the bruising, stretching, &c., that had occurred. In spite of constant doses of sulphate of magnesia the intestines again became loaded in the course of a few days, although the consistence was much less firm.

On Oct 7th the girl was anæsthetised, and after another

[1] See also Sajous, vol. v., 1892, F. 8.

hour's hard work the bowel again became fairly empty, and the operation which had been planned was proceeded with. This consisted of a combination of Mr. Whitehead's well-known operation for severe hæmorrhoids, together with Mr. Lawson Tait's splitting operation for cases of ruptured perineum. The rectum being plugged through the vaginal fistula, a vertical incision was made from the apex of the perineum to the tip of the coccyx and continued down to, but not at first dividing, the mucous membrane of the rectum. The rectum was then freed for some distance from its attachments, so that it bulged into the upper part of the wound like the end of a sausage. Anteriorly each side of the vaginal fistula was split, and the posterior wall of the vagina was dissected up from the anterior wall of the rectum for some distance beyond the upper end of the fistula. After continuing the original vertical incision through the mucous membrane of the lower end of the rectum seven sutures were inserted, attaching the edges of the freed rectum to the edges of the skin, so as to form an anus. These, however, were not tied until the vaginal fistula had been sutured. Commencing at the apex of the vaginal fistula, a small, threaded right-angled needle (cleft palate) was passed through the mucous membrane on one side from before backwards, and then catching the other side from behind forwards, so as to bring together the anterior one and a half inches of the fistula. A strong-handled, threaded curved needle was then passed, first within the split edge of the fistula on one side, and then within that of the other side (as recommended by Mr. Lawson Tait). This was done in three places, and the whole of the stitches were then tied, first those of the vaginal fistula and then those round the new anus. All that remained to be done was the insertion of numerous superficial stitches in the perineum and behind the new anus. When the operation (which lasted nearly an hour) was completed the external appearance was (with the exception of the superficial sutures being visible) almost normal. The legs were tied together, opium in half-grain doses was ordered to be given, and the catheter was to be used at regular intervals. The after course of the case was tedious although in the end highly satisfactory. The great difficulty was caused by the want of power of expulsion in the usual muscles of defecation. All through her life of nineteen years this power had been in abeyance. A regular process of abdominal massage was carried out, together with systematic doses of castor oil, which was found to be the only aperient that was satisfactory in its operation. The vaginal septum and all the apposed surfaces in front of the new anus healed at once, but there was considerable separation of the surfaces around the posterior part of the new anus. Eventually, however, these healed by granulation and she was discharged on Dec. 14th, 1893, with a completely satisfactory anus and, what is still more remarkable, with perfect control over her fæces. Her general health and appearance also steadily improved, and her only trouble now lies in the necessity of taking regular doses of aperients. It is probable that in time the muscular power will develop, and that she may be able to have natural evacuations without any aid.

Remarks by Mr. THOMPSON.—I suppose that this is probably a unique case. Cases of imperforate anus are common enough in infancy, but I have not been able to come across any case corresponding to this one either in age or result. For nineteen years she had had incontinence of fæces, only the overflow dribbling away, and nature was in the habit of relieving herself by occasional attacks of purging and stercoraceous vomiting. Any condition more horrible can hardly be imagined. The girl was a twin; her fellow twin was a perfectly normal girl, and the mother's other children are also perfectly normal.

UNIVERSITY OF CAMBRIDGE.—The Shuttleworth Scholarship of the annual value of £55, tenable for three years, will be awarded in March on the results of the intercollegiate examination in natural science. Candidates must be medical students of the university of not less than eight terms' standing who have passed the previous examination as required of candidates for honours. The subjects of examination for this scholarship are botany and comparative anatomy in its most general sense, including zootomy and comparative physiology, and there will be practical work in all these subjects. Shuttleworth scholars must become members of Gonville and Caius College, and must send in their names to one of the tutors of the college before March 1st.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Nerve-stretching and splitting in Localised Interstitial Neuritis.—Intussusception of Large Intestine due to Papilloma.

AN ordinary meeting of this society was held on Feb. 13th, Dr. CHURCH, Vice-President, being in the chair.

A paper on Nerve-stretching and splitting in Localised Interstitial Neuritis, leprous and otherwise, was read by Dr. KENNETH MCLEOD. He said that in the year 1877 he proposed the operation of nerve-stretching in cases of anæsthetic leprosy, as a means of liberating the nerve tubules from the destructive pressure exercised by the organised neoplasm of leprous neuritis. The operation had been performed in over 250 cases by Lawrie, Downes, Neve, Wallace, Rake, and others. In a large proportion of these cases benefit had been conferred—the pain had been assuaged, sensation restored, muscular power improved, eruptions cured, ulceration healed, and the general nutrition of the limbs greatly ameliorated. In many cases these effects had been permanent, and persons who were previously incapacitated for work had been enabled to resume their occupations. In the year 1880 he had occasion to lay open a sinus which occupied the interior of the ulnar nerve for a distance of four inches. The indurated nerve was split in two and stretched. Great benefit followed the operation as regarded sensation, motion, and nutrition, which was observed to be permanent and progressive for a period of ten years. Since then longitudinal splitting had been practised in eight recorded cases, in two of which signal success was obtained and in four decided relief; in two cases of multiple leprous neuritis no improvement occurred. The circumstances connected with leprous neuritis which countenanced operation were: (1) the interstitial character of the inflammation; (2) the limitation of the lesion as regarded both the length and thickness of the nerve; (3) the site of the lesion, which usually attacked superficial nerves in places where they were easy of access; (4) the pathological results of the lesion; (5) the evidence in some cases of a tendency to limitation of the lesion in time and an effort towards resolution; (6) indications of existing tension and pressure; and (7) the progressive character of the malady in intensity and area. The constitutional and inevitably fatal nature of the disease of leprosy was, on the other hand, a discouragement which did not obtain in cases of non-leprous neuritis; these were not uncommon, and in them, other measures failing, operation was more justifiable and promising. The facts and considerations adduced seemed to him to support the following conclusions: 1. The operation of nerve stretching had been followed by decided relief in a large proportion of cases of leprous neuritis which had been subjected to this method of treatment. 2. The benefits conferred consisted in the relief of suffering (pain, tingling &c.), the restoration of sensibility, the return of muscular power, the healing of ulcers, and general improvement in the nutrition of the affected parts. These benefits speedily followed the operation, and in a considerable proportion of cases had been sustained and progressive. In many instances repetition of the operation had been resorted to with success. 3. Additional knowledge was desirable regarding the precise conditions under which recourse to the operation was likely to be advantageous, more especially with reference to the limitation of the local lesion and the stage of the malady. 4. The relief obtained by the proceeding appeared to depend on the removal of pressure and tension on nerve fibres caused by the products of the inflammatory disease which had taken place in the ensheathing connective tissue of the trunk. 5. When these products had undergone organisation, and the enveloping material had become sclerosed, longitudinal incision of the sheath, followed by manipulation and stretching, gave reasonable promise of more complete relief—resolution or even restoration—than stretching alone. 6. This process of splitting sclerosed nerve trunks had been attended with success in a sufficient number of cases to render further trial justifiable and desirable. 7. In cases of non-leprous localised neuritis these procedures were more likely to be followed by

radical and permanent improvement than in those of anæsthetic leprosy. 8. In no instance had either the stretching or splitting of nerves been productive of any inconvenience or harm.—Mr. GODLEE inquired whether, in the cases in which nerve-splitting had been employed, stretching was also carried out.—Dr. THIN had paid much attention to the pathological condition of the nerves in leprosy. The first nerve that he had examined very closely resembled tendon in structure, for not a trace of nerve structure could be seen. The disease was brought about by the migration of cells containing leprosy bacilli into the connective tissue between the nerve tubules, the result being a slow formation of connective tissue without inflammatory action. The extraordinary benefit following nerve-stretching could only be explained on the supposition that a new downward growth of nerve tubules took place, and that this happened owing to the disappearance of the bacilli-laden cells which caused the growth of the connective tissue. Such a hypothesis accounted for the permanence of the results. The manipulation of the nerves gave rise to effusion, with diapedesis of leucocytes, the latter gathering up and sweeping away the pathogenic organisms. It was known that many colonies of leprous bacilli would lodge locally in the nervous tissues of some individuals and never infect the general system, a power existing apparently in the individual to destroy the bacilli wherever they threatened to generalise. Observation of early cases showed that the bacilli passed into the nerves from the periphery. He referred to a case which he saw in its earliest stage, and in which the brisk inunction of an ointment of pyrogallic acid into the anæsthetic patches was productive of complete and permanent cure. The ointment reached the nerve twigs and irritated them at a time before the bacilli had penetrated far into their structure; the artificial irritation caused an excursion of leucocytes, which destroyed the micro-organisms. He thought that if these cases were attacked sufficiently early the disease might be eradicated by this method.—Mr. R. W. PARKER said that in a case of leprosy in a lad under the care of Dr. Crocker about ten years ago he stretched the ulnar nerves without good result.—Dr. MCLEOD, in reply, said that in only eight of the cases was nerve-splitting done, but in these the nerves were also manipulated to free them from adhesions. He thought that there was a strong probability of a growth of new tubules taking place down the degenerated nerve trunks. In three cases the nerve had given way under stretching, and yet afterwards sensation was completely restored.

Mr. BRYANT then described two cases of Intussusception of the Large Intestine, due to the presence of a papillomatous growth, successfully reduced by the introduction of the hand into the rectum after removal of the growth. The first case was that of a woman aged eighty-four, who was under the care of Dr. J. Mackern for intussusception. When seen by Mr. Bryant in October, 1886, the intussusception filled the rectum, and a papillomatous growth was found attached to the orifice of the intussusceptum. The growth was drawn down, ligatured at its base, and removed, and the intussusception was pushed up by the hand introduced into the rectum nearly up to the elbow, when the bowel rushed away from the hand. The patient subsequently rapidly recovered. The second case was that of a woman aged fifty, who was under the care of Dr. Richardson of Putney. She had been ailing for years from bowel trouble. The intussusception was discovered by Dr. Richardson in August, 1893, and when Mr. Bryant saw her the nature of the case was clear, and a papillomatous growth was found attached to the orifice of the intussusceptum, as in the former case. In this case, as in the last, the growth was drawn down, ligatured at its base in three parts, and cut off, and the intussusception reduced by the introduction of the hand into the rectum above the wrist, the bowel at this distance disappearing. The patient rapidly recovered after the operation. Mr. Bryant remarked that he looked upon these two cases as interesting, not only from their nature, but from the practice they illustrated. He pointed out the connexion between prolapse of the bowel at the anus and intussusception, and how both conditions were due to local irritation either of a temporary or more permanent nature. In children the former condition was most common; in adults the latter was to be expected and looked for. He illustrated the subject further by means of preparations from the museum of Guy's Hospital, three of which were examples of intussusception, due in two to the presence of polypi—in one of the jejunum and in the other of the lower small intestine; whilst the third case was due to the existence of an inverted diverticulum of the ileum, which acted like a polypus. The three other preparations of intussusception were due to the presence of cancerous growths, and all were of the large intestine. Mr. Bryant then pointed out how, in the two cases he had related, the cause of the intussusception was papillomatous, and expressed an opinion that those growths were not infrequent in the large intestine and rectum, and that in all cases of intussusception in adults they were to be looked for. He then dwelt upon the treatment of these cases, and expressed a hope that the means which in his hands had proved so successful would be applied to future cases of intussusception in adult females which had made their way into the rectum, whether due to the presence of a growth or some unknown cause. In many cases he admitted that it was more than probable that success would not follow, but in others he believed it surely would, when the fact was recalled that in the only two examples in which he had employed it, or in which he felt justified in saying it had been employed, success had been achieved. In conclusion he said that he had found little difficulty in introducing his hand—which measured when closed for introduction nine inches and a quarter—into the rectum after he had forcibly dilated the anus, and that in only one case of about a dozen in which he had made the attempt was there any subsequent troublesome want of control in the anal sphincter. A steady alternating half-screwing movement with moderate pressure had effected the desired purpose. Great violence would do harm. He had never succeeded in passing his hand into the rectum of a male patient. He, finally, strongly urged the adoption of the practice illustrated by his cases upon the attention of surgeons. Dr. MCLEOD said it was not difficult to introduce the hand into a male patient's rectum under some circumstances. When there was a large prolapse of the upper part of the rectum through the lower part this would give rise to a considerable and permanent dilatation of the anal sphincter, and the introduction of the hand was then easy. He had frequently thus dealt with prolapse after straining in chronic dysentery. In one case, in a very large prolapse, the intestine returned into the abdomen with a rush, and a towel which had been wrapped round the prolapsed gut retreated up the rectum with the returning bowel and was with difficulty recovered. In one case, after reducing a prolapse, he passed his hand into the sigmoid flexure, so that his fingers touched the inner aspect of the abdominal wall opposite the anterior superior iliac spine. He fixed the sigmoid in this position with harelip pins passed through the abdominal parietes and then cut down externally and stitched the parietal peritoneum to the intestine. The pins were taken out after twenty-four hours, and there was no return of the prolapse.—Mr. GODLEE had heard serious accounts of the shock which had followed introduction of the hand into the rectum. He thought that the prolapse might have been reduced by injecting with water or with air, though whether this procedure was safe depended upon how much of the coat of the bowel was included in the ligature for removal of the polypus. He believed that polypi in this region were comparatively rare.—Mr. BRYANT, in reply, said that he agreed that the hand should not be passed into the rectum unless it was absolutely necessary. He did not think the danger was great in women, though he admitted that there was more risk in men. He was not disposed to think that papillomata of the large intestine were so very uncommon; he had met with a large number of instances.

MEDICAL SOCIETY OF LONDON.

Second Lettsomian Lecture: the Causes of Peritonitis.

AT an ordinary meeting of this society on Feb. 12th, Mr. TREVES delivered the Second Lettsomian Lectur, of which the following is an abstract.

Of the many classifications of peritonitis which have been attempted those are the most satisfactory in which the etiology has been taken as a basis; for every addition to out knowledge of this trouble tends to make the classification of its various forms more and more simple. It has now become evident that peritonitis depends almost, if not quite, entirely upon infective processes, and that these agencies are concerned directly or indirectly in every form of the disease; indeed, the domain of non-infective peritonitis is rapidly becoming more and more dubious. Among the general

considerations to be borne in mind the dose of the poison must obviously be liable to considerable variations in amount and in virulence, while the resistance of the individual to the growth of septic organisms is influenced by a multitude of circumstances. There are questions of age and health; of the effect of such conditions as Bright's disease, diabetes, and alcoholism; of local conditions such as damage to the peritoneum, with interference with its functions; there are the presence of ascites, the coexistence of extravasations of blood, bile or intestinal matter, and the entirely undefined peculiarity of the individual, which appears to alone render one man susceptible and another almost exempt. In the great majority of instances peritonitis depends upon "continuity infection" spreading to the peritoneum from a neighbouring tissue other than the serous membrane. Under this heading come peritonitis, following hernia or any visceral lesion or disease capable of producing the trouble; puerperal peritonitis; most forms of pelvic peritonitis; certain varieties of tuberculous peritonitis, and the variety named "chemical peritonitis," where the peritoneum is invaded not so much by the micro-organisms themselves as by their chemical products. It would exclude the larger number of cases which follow accidental or operation wounds. The following classification of peritonitis according to its cause appears to be justified by our present knowledge of the subject: (1) peritonitis due to infection from the intestine; (2) peritonitis due to infection from without; (3) peritonitis due to the pneumococcus; (4) tuberculous peritonitis; and (5) peritonitis of a doubtful nature. In order to form an approximate idea of the relative frequency of these different forms a tabular study was made of 100 cases of peritonitis taken from the records of the London Hospital, and a further table was compiled from the monographs of Fraenkel and Tavel and Lanz of the cases of peritonitis in man in which micro-organisms were found in the exudation. Under the heading of peritonitis due to infection from the intestine are included most cases of peritonitis associated with hernia, with intestinal obstruction, and with perforation; peritonitis due to any form of ulceration of the bowel; to enteritis; to cancerous growths of the gut; to troubles in the appendix; to inflammatory changes in the biliary canals; and some forms of peritonitis following upon operation. The micro-organism most usually answerable for these various forms of peritonitis is the bacterium coli commune, the literature regarding which has become so extensive as to be almost overwhelming. It has been shown to be identical with the bacillus pyogenes fœtidus, the bacillus lactis aerogenes, and the pyogenic urinary bacterium of Clado and Albarran. It closely resembles the bacillus of typhoid fever; it is found in individuals in perfect health; and has been demonstrated along the whole length of the alimentary canal from the mouth to the anus, its natural habitat being the bowel. The term bacterium coli commune has been regarded as a generic term applicable to an extraordinarily numerous family of bacteria, which are sometimes mobile and possessed of cilia. A striking feature of this bacterium is its variation in virulence; it seems to be quite harmless when taken from the normal intestine, but if the bowel becomes the seat of almost any diseased condition then it becomes at once virulent and the virulence may vary considerably in degree. Virulence has been found to be developed in cases in which the bowel has been obstructed, strangulated, or inflamed, in venous congestion of the gut, in œdema of the bowel wall, in diarrhœa, in typhoid fever, in cholera, in diarrhœa produced by tartar emetic, and in instances of advanced constipation. When the intestine is healthy the bacterium coli commune has little disposition to escape through the gut wall or to invade the tissues of the body after death. If, however, the intestine be damaged or diseased then the bacterium shows an active inclination to penetrate through the bowel wall and is usually found to have extensively invaded the tissues after death. If a culture of the virulent bacillus be injected into the peritoneum of animals the result will vary, other things being equal, according to the dose. When peritonitis is produced it is usually purulent. In the slightest cases after an illness with diarrhœa the animal recovers; in another grade a localised chronic purulent peritonitis follows; in a third degree death is rapidly brought about by a diffuse fibro-purulent peritonitis; while if a large dose is employed the animal dies from acute sepsis before any phenomena of peritonitis are produced. Fluid, especially blood in the peritoneum, aids the development of peritonitis. Sterile intestinal fluid increases the activity of the bacillus, while sterile saline solution retards it. The bacillus can produce pus after inoculation, for it has been found in man in a state of almost pure culture in the pus from an ischio-rectal abscess. The endothelial cells of the peritoneum do not appear to act as phagocytes. Arndt has shown by a series of most carefully conducted experiments that micro-organisms can pass through the gut wall into the peritoneal cavity when strangulation of the gut is of quite a slight grade and is far short of producing even a limited gangrene. In perforative peritonitis the other micro-organisms found in fæces develop in the serous cavity only for a time: the bacterium coli commune alone survives. Barbacci considers that death in these cases is due to absorption partly of the bacterial products and partly of the noxious chemical matters contained in the intestinal fluid which escapes into the abdominal cavity. In the cases of peritonitis after laparotomy in which the colon bacillus is found it is probable that such an injury had been inflicted upon the intestinal peritoneum at the operation as to permit the bacterium to escape through the bowel wall, but little damage being required to allow of such escape. It is possible that the colon bacillus is the cause of certain of the cases of pneumonia following upon peritonitis. Some of the constitutional symptoms attending severe constipation may be due to the absorption of the products of this widely diffused bacillus. The exudation of this bacterium when it attacks the peritoneum is often characteristic. The fluid, at first clear and greenish-looking, becomes greenish-yellow, thin, semi-opaque, and is foul smelling; if it pass on to suppuration the pus is offensive. In chronic cases there is produced a white, soft, custard-like material. The irritant may reach the peritoneum in various ways: bacteria may escape through a perforation in the bowel; they may pass through the wall of a segment of intestine which has been in some degree damaged but not perforated, and chemical products of bacteria may reach the peritoneum by either one of these routes. Peritonitis due to infection from without includes puerperal peritonitis, peritonitis consequent upon inflammatory troubles in the genital organs or in the parietes of the abdomen, and some forms of peritonitis following upon operation. The micro-organisms usually associated with these varieties are pyogenic cocci, and notably the streptococcus pyogenes, either alone or associated with a lesser proportion of other micro-organisms. Experimentally it has been shown that injections of pyogenic cocci into the peritoneum act more vigorously if mixed with a fluid difficult of absorption, such as blood, or, if introduced with a corrosive fluid, capable of damaging the peritoneal endothelium. In operation cases it probably gains an entrance through the wound; in puerperal peritonitis through the pelvic organs, following the veins, or lymphatics, or Fallopian tube; and in those rare instances of peritonitis associated with erysipelas of distant parts it must be assumed to reach the serous membrane through the blood. Peritonitis due to the pneumococcus has not been so soundly demonstrated as to possess an indisputable existence; the pneumococcus would seem to be at one time noxious to the peritoneum and at other times to be harmless. Then it must be remembered that the connexion of the pneumococcus with pneumonia is a subject about which there is much conflicting evidence, and that peritonitis is a very rare sequela to pneumonia, although pneumonia is not an uncommon complication of peritonitis. With tuberculous peritonitis I intend to deal in a future lecture. Under the purposely indefinite heading of peritonitis of doubtful nature it will be convenient to discuss (*a*) peritonitis due to irritants, (*b*) forms of the trouble reputed to depend upon rheumatism, gonorrhœa, syphilis, Bright's disease, and alcoholism, and (*c*) peritonitis met with in the newly born. There is much conflict of opinion as to peritonitis due to irritants. It has been maintained that a non-infective peritonitis may be produced by mechanical, chemical or thermal irritants, and that such peritonitis will be usually plastic and localised, but in connexion with this it must be remembered that pyogenic cocci will act more readily and in smaller doses if introduced into the peritoneum together with some corrosive fluid capable of injuring the serous endothelium, and, further, that such injury to the peritoneal surface encourages the escape of the colon bacillus from the intestine. Fæces if introduced into the peritoneum cause peritonitis, not by chemical action nor as an irritant, but by reason of the micro-organisms or their products contained in the extravasation. A consideration of the whole matter leads to the conclusion that the production of peritonitis by non-infective irritants has not yet been satisfactorily proved. The evidence concerning so-called rheumatic peritonitis is by

no means satisfactory and will not stand a critical examination. With regard to the cases associated with gonorrhœa, it must be remembered that the gonococcus will not survive in the peritoneal cavity, and so it must be assumed that pyogenic cocci have found a nidus in the discharge from the genitals and have spread by extension to the peritoneum. The peritonitis reported to be due to Bright's disease, to alcoholism, and to syphilis has not been shown to have a specific etiological existence; it would seem rather to occur under conditions which are very favourable to bacterial growth or to be due to extension from parts which are already inflamed. The peritonitis met with in the newly born appears to be due either to puerperal infection, brought about by direct extension from the cord, or it may be due primarily to the giving way of the bowel in cases of imperforate anus, or to that rupture of the normal sigmoid flexure which has been assumed to be due to direct pressure on the bowel during parturition.

CLINICAL SOCIETY OF LONDON.

Adjourned Discussion on Nephrectomy for Malignant Tumour in an Infant.—Multiple Epitheliomatous Growths developing in Psoriasis.—Excision of Appendix in Presence of Acute General Suppurative Peritonitis.—Fungating Growth of Penis lasting Nineteen Months.

AN ordinary meeting of this society was held on Feb. 9th, the President, Mr. J. W. HULKE, being in the chair.

The adjourned discussion on Mr. Malcolm's case of Nephrectomy for Malignant Tumour in a patient under two years of age was resumed by Mr. BLAND SUTTON, who said that the chief facts of the case so carefully detailed by Mr. Malcolm might be briefly summarised thus. He successfully removed from a child twenty-three months old a large renal sarcoma, including its capsule. The tumour consisted mainly of epithelial tubules embedded in a rich stroma composed of young connective tissue. The child was still alive, fourteen months after the operation. This was, of course, an admirable result, as a careful analysis of reported operations on renal sarcomata in infants showed that more than half the patients succumbed to the operation and of those that survived life was rarely prolonged beyond a year; the longest period of survival was eighteen months, of which three cases were now known. Mr. Malcolm asked, and very naturally, whether there were any facts in his case which served to explain its success. The points on which he appeared to put especial stress were: (1) the removal of the capsule with the kidney; and (2) the structure of the tumour, and in regard to this he pertinently asked whether it should be called a sarcoma. Unfortunately neither of these facts were contributory to success. Such questions could not be answered from the circumstances surrounding a single case. There were two aspects in which the matter must be discussed—pathological and surgical. If this tumour stood by itself it would probably not be called a sarcoma; but a broad survey of renal sarcomata in children showed that they were characterised by two peculiar kinds of tissue. Of these, the most remarkable consisted of large spindle cells transversely striated and resembling in section voluntary muscle fibre; the other was cubical epithelium arranged as tubules or as solid columns. The presence of tubules was an almost constant feature of sarcomata arising in glands, and was due to the entanglement of their tubular elements. In renal sarcomata of infants these epithelial structures might be very abundant or almost absent. In the latter condition the tumour was very prone to contain striated spindle cells in great abundance; indeed, these cells and the tubules appeared to be in a measure antagonistic. It occurred to him that tumours with abundant tubules might be less malignant than those in which striated spindles abounded; but further investigation did not support this. Indeed, Abbe had reported two cases in which infants were alive and well eighteen months after operation: in one, muscle tissue was paramount in the growth, and the other was essentially tubular; hence deductions in regard to freedom from recurrence drawn from histological facts fell to the ground. When we came to consider the advisability of removing the capsule or not it appeared that eighteen months' immunity had followed an operation in which the tumour was simply shelled out of its capsule; it was needless to mention the increased operative risks when attempts were made to remove the renal capsule. Mr. Sutton did not discuss the methods employed in nephrectomy, except to soothe Mr. Malcolm's anxiety in regard to the treatment of the ureter, and to assure him that in nephrectomy for solid tumours he need give no thought to the ureter; it would take care of itself. We must, however, ask ourselves, Should renal sarcomata in children be excised? Surgeons interfered with tumours when they were sources of inconvenience, pain, or threatened life. Renal sarcomata in children were neither inconvenient nor painful, but they did threaten life. In the cases under consideration the chances of prolonging life were so very remote, and the immediate risk to life was so excessively great, even in the hands of the most skilful operators, that any surgeon who undertook the removal of a renal sarcoma in an infant incurred a very grave responsibility, and he would act more judiciously by placing the child under the beneficent charge of a physician.—Mr. ALBAN DORAN wished to mention a clinical fact in connexion with malignant tumours of the viscera in children. Dr. Herbert Spencer, when recording his investigations into the causes of death in stillborn children, was struck with the extreme frequency of hæmorrhage into the solid viscera: in thirty-eight of 120 cases there was hæmorrhage into or around the kidney, and in some instances it was partly inside and partly outside the capsule. This might be a source of origin of sarcoma or of carcinoma; for many instances were on record of the development of malignant tumours in extravasation and the neoplasm might start in the organ itself or in the capsule. He agreed that the tubules were probably derived from the true kidney substance.—Mr. TARGETT said that the stroma was scanty and the section composed mainly of tubules. He, however, had only examined one portion of the growth.—The PRESIDENT said that in November, 1860, he brought before the Pathological Society the report on a case of a large tumour of the testicle removed by Mr. Holmes; it contained structures closely simulating muscular fibre.—Mr. MALCOLM, in reply, did not see why these tumours should be treated differently from other sarcomata, which it was the rule to remove as widely as possible. In his experience taking away the capsule did not add materially to the difficulty. He considered that it was a great advantage to have the ureter outside, as then the operator's hands were freer for the after treatment.

Mr. ARBUTHNOT LANE read an account of Multiple Epitheliomatous Formations occurring at different periods in a patient suffering from Psoriasis from infancy, and who had for thirty years been treated with Fowler's solution. The man, when first seen by him, was sixty years of age, and had on the back of his forearm an ulcerating epitheliomatous area nearly two inches in diameter. This was said to have commenced as a single nodule, about which at a later period three distinct nodules formed. As time went on the increase in the size of the four plaques resulted in their union, and the formation of a single one. There was no glandular enlargement. The ulcer was removed in April, 1892. At that time he was free from any eruption and made no mention of it. Mr. Lane saw him again in March, 1893, when he found three separate epithelial growths ulcerating in their centre and placed on the scrotum and perineum. They were in the same vertical antero-posterior plane, and were separated from one another by intervals of one and two inches respectively. These were removed and examined microscopically. At this time the patient was covered by the eruption, and gave the history already mentioned. He was directed to leave off taking the arsenic and to return if anything suspicious was observed. Not appearing, he was written to in December, 1893, when two raised plaques were found a quarter of an inch in diameter and placed at the same level in the scrotum an inch apart, and an inch in front of the most anteriorly situated of those last removed. They were perfectly smooth. On being cut out and examined microscopically they were found to be small epitheliomata. Again, on Jan. 22nd last two more typical little epitheliomata were removed from the scrotum, one being in the scar of one that had been very freely removed on the last occasion. This patient up to the present date had had eleven separate foci of malignant growth, four appearing on the forearm and seven on the scrotum and perineum, and on only one of these—namely, one by the anus—was there any suspicion of the growth having taken place in a patch of psoriasis. There was no reason to suppose that the formation of these growths would cease, and they must be looked for and removed as they appeared.—Mr. HUTCHINSON asked whether any other conditions

preceded the development of the epitheliomata. Was there any corneous or other process? He had seen a case in which a peculiar condition of the palms and soles was present: a number of little corny indurations formed, and in these the epitheliomatous process was set up. In one case an epitheliomatous ulcer developed over the side of the abdomen, the patient having previously suffered from pemphigus. He was now in the habit of leaving off the administration of arsenic when there was any altered sensation or any corneous development in the palms and soles, for these he took to be notes of warning.—The PRESIDENT had tried to investigate the question as to how far arsenic acted as a cause of simultaneous multiplicity of malignant growths. He went to Devonshire to inquire into the condition of those who were working in the old copper mines there to extract the arsenic. He found them to be a miserable class of men, all more or less broken down in health, notwithstanding the precautions they took to prevent the arsenic entering their systems; but he could find no single instance of epithelioma having started in consequence of exposure to arsenic. He had under his care at the present time in the Middlesex Hospital a case of multiple outbreak of carcinomatous growths.—Mr. LANE, in reply, said that the little growths appeared to develop in perfectly healthy skin.

Mr. LANE then read the notes of a second case of general acute Suppurative Peritonitis due to Appendicitis in a patient who had been under the care of Dr. Shute of Northfleet, and on whom he had operated. A lad aged eighteen had three years previously had an attack of acute abdominal pain which confined him to bed for a week. It was regarded by the medical attendant as inflammation of the bowels. A year ago he had a similar attack which kept him in bed for four days. On Sept. 1st, 1893, and on the day following he suffered from slight pain in the stomach, but did not feel at all ill. He attended to his duties, took his food well, and went for a long walk in the evening of the second day. Between six and seven in the morning on the 3rd inst. he awoke with diffused abdominal pain, which persisted and increased in severity. His bowels were opened freely, but as the pain continued he took a dose of caster oil. Dr. Shute saw him for the first time at two o'clock the same day. He found him in great pain, with a rigid and tender abdomen, and with cold extremities. He had vomited once after taking the castor oil. Fomentations were applied, and morphia was freely administered. On Sept. 4th the patient was worse, and on the following day, as his symptoms had increased in severity, Mr. Lane was asked to see him with a view of interfering surgically. He saw him with Dr. Shute and Mr. Crook and concurred in their diagnosis—namely, that an abscess had formed about the appendix, and that the very acute peritonitis had resulted from its rupture on the morning of the 3rd inst. Owing to the extreme rigidity of the abdominal muscles and the associated tenderness no examination by palpation was possible. In spite of the very serious condition of the patient and the almost universal failure of such operations under these conditions it was decided to interfere. After the administration of morphia and chloroform, the rigidity of the abdominal muscles remaining while the patient was in a condition of complete anæsthesia, a median incision was made. A small quantity of creamy pus oozed out between the edges of the peritoneum. On exploring the abdomen all the viscera were seen to be intensely injected, to move freely upon one another, and to be covered by a thin layer of pus, which was most obvious where the viscera came into apposition. The inflammation seemed to be equally intense everywhere, and there seemed to be no adhesions. On examining the right iliac fossa a very large appendix was found lying immediately internal to the anterior superior spine. It was exposed by an incision made over it, when it was found to be about as large as a thumb, intensely hard and congested, and to form part of a wall of a localised abscess cavity with adjacent viscera. It was evident that the general peritonitis resulted from the rupture of this abscess cavity. The appendix was removed and was found to be intact. It had no smell whatever, neither had the pus in its immediate vicinity. The advisability of washing out the peritoneal cavity was discussed, and it was considered that no benefit would be derived from it, since irrigation, to be sufficiently thorough to wash away even a proportion of the pus which was so uniformly distributed in a fluid state and in very small quantity, would, owing partly to its universal diffusion and partly to the extremely rigid condition of the abdominal muscles, only result in the death of the patient on the table. Again, there was no reason to suppose that if all the pus could be removed the intense inflammation of the peritoneum would subside. It was also felt that the introduction of drainage-tubes or of tampons of gauze would serve no useful purpose, but would rather add to the patient's risks; so it was determined to close the wounds, to keep the patient under morphia, and to feed him by the rectum. The patient improved slowly but steadily after the operation, so that by the 15th inst., when the stitches were removed, he had lost his pain and the abdominal muscles moved freely during respiration. The chief point of interest about the case was the fact that a most acute general suppurative peritonitis due to the bursting of the wall of an abscess cavity about the appendix recovered under medical treatment only. The operation could have had no beneficial effect upon the existing peritonitis. That the removal of the intensely inflamed appendix was most advantageous to the patient was obvious. How far its continued presence in the abdomen would have affected the result of the existing peritonitis could not be determined with any certainty, though the improvement that followed almost at once upon its removal led to the supposition that it was acting as a progressive source of infection to the peritoneal cavity. Besides that, the condition of the appendix was such as to suggest that it might become gangrenous. The operation, therefore, in all reasonable probability saved the patient's life and freed him from the risk of subsequent attacks.—Mr. MALCOLM supposed that it was an instance of diffusion of pus from the neighbourhood of the appendix rather than of acute general peritonitis. The sequel appeared to show it to be an instance of absorption of pus.—Mr. BARKER, remarking on the absence of drainage, said that he had met with two cases in which he did not adopt drainage, and both recovered; in one there was a pint of pus present, and in the other more than a pint. He evacuated as much of the pus as possible, and trusted to nature to remove the rest. He flushed out most carefully with hot water, but that could not have removed all the pus.—Mr. MARSH said that the case was evidently of long standing, and an abscess which had formed round the appendix must have ruptured many hours before the operation was done. If washing out was unnecessary it would shorten the operation considerably.—Mr. BOWLBY inquired whether a large quantity of pus was evacuated.—Mr. WATERHOUSE related a somewhat similar case. A woman had been suffering for four days from acute intestinal obstruction; he opened the abdomen and found marked acute general peritonitis, but he did not discover the cause of the obstruction. He flushed out freely with warm boric acid lotion and closed the abdomen without drainage, and the woman did well.—Mr. GOULD asked whether the removal of the appendix was of any service and whether any immediate effect was produced by the operation on the condition of septic intoxication or on the pulse or temperature.—Mr. LANE, in reply, said that there had been a small abscess about the appendix and the pus was distributed everywhere in the abdomen. He had performed laparotomy in many such cases, and all the patients but this one had died. He must have left a quantity of pus which was not absorbed, for very little was evacuated. There was no smell about the appendix when excised. He did not think that the operation did the patient any harm, and he improved slowly afterwards, but the procedure did not influence the progress towards recovery.

Mr. JOHN LUNN read the notes of a case of Fungating Growth of the Penis. The patient, a man thirty-one years of age, was admitted into St. Marylebone Infirmary in August, 1892. He had been under treatment for a growth on his penis since January, 1891, at different hospitals and infirmaries, but had not got quite well. Amputation was advised at one hospital, but the patient refused. On admission the patient had some old doubtful signs of phthisis at his right apex. There was a mass of unhealthy granulations all round the corona of the penis and covering the glans, and there was a large, raw, granulating surface on the dorsum of the penis near the root, and several small nodules on the scrotum (near where it joined the skin of the penis on the under surface). Some of the nodules were breaking down, leaving small painful ulcers (the nodules were due to the affection of the sebaceous follicles), and there were also present some doubtful amyloid glands in both groins. The patient was suffering intense pain, especially on passing urine, and the surfaces of the glans penis were raw and covered with small granulations. These were curetted under an anæsthetic several times, but did not improve

much, and the ulcers spread rapidly at their edges. Morphia was given often to relieve pain. Iodoform and cocaine were applied freely and a mixture of iodide of potassium with mercury was given internally. Continuous irrigation was tried for two nights and days, but was discontinued as the patient complained of such intense pain; though the effect on his penis was very marked and the patient rendered much more comfortable, yet he still complained of intense pain on passing urine and when the penis was dressed. About the end of November the patient's health began to fail, his temperature to rise, his life seemed to be a misery, and he begged for something to be done, so it was decided as a last resource to amputate the penis. This was done by Dr. Nix on Jan. 25th, 1893. A few days after the operation the patient began to suffer from swollen glands under his jaw on both sides, and his temperature rose to 102° F.; also a gland near Poupart's ligament (on the inner side) became much enlarged. The suppurating glands under the jaw were incised and some bad teeth were removed, but the condition under the jaw did not improve, so on March 2nd, the glands were scraped and the glands in the groin were removed. The glands under the jaw were thought to be due to salivation from the large doses of mercury he had been taking. He was discharged cured in June. Mr. Targett reported that the extremity of the organ was converted into an oval lobulated tumour, two inches in its chief diameters. The pigmental integuments at the margin were raised and undermined, and near the base of the tumour several white "tubercles" were seen protruding through the skin. The prepuce had been laid open; its lining membrane was much ulcerated and nodular, the glans penis being indistinguishable. Sections taken from the edge of the growth were composed of cells and large round nuclei and numerous capillary vessels, as in granulating tissue, but sections from inguinal glands contained suspicious nodules of epithelial cells; the sections did not show any evidence of tubercle.—Mr. HUTCHINSON said that it was still very difficult to say whether the case was one of syphilis or of tubercle; he inclined to the former belief, even although the sore did not heal well under mercury. He would have been inclined to have adopted the immersion bath for a longer period. He had had a man under treatment for at least a year with a sore on the eyelid which resisted all treatment and satellite sores were formed round it. It was ultimately mastered by antisyphilitic treatment.—Mr. TARGETT said that there was no appearance of tubercle microscopically.—Mr. GOULD asked whether there was medical evidence to prove that a hard sore followed the development of a soft sore. He regarded it as a relapse in the scar of the primary sore, and it was possible that the secondary symptoms had passed unobserved. It resembled the fungating tertiary sore of the leg which was often resistant to treatment.—The PRESIDENT thought the case was one of syphilis. He quoted the case of a man with a large fungating sore on the instep which had been considered to be epitheliomatous, and other masses developed higher up the leg. The usual remedies having been tried and failed, he amputated the leg just above the knee. Later, gummatous masses sloughed out from his arm, and after death another large granuloma was found in the iliac fossa. He looked upon it as a late manifestation of hereditary syphilis; for two of the patient's sisters came later with interstitial keratitis.—Mr. LUNN, in reply, said that there were no signs of secondary syphilis. The diagnosis of hard chancre following on soft had been confirmed by a medical man.

OBSTETRICAL SOCIETY OF LONDON.

THE annual meeting of this society was held on the 7th inst. at 20, Hanover-square, Dr. G. E. HERMAN, President, in the chair. The following specimens were shown:—

Dr. PROBYN WILLIAMS: Abscess in Anterior Abdomina Wall in connexion with the Bladder.

Dr. BOXALL: Fibroid removed from the Uterus fifteen days after delivery.

The PRESIDENT (for Mr. W. GROGONO); Acardiac Acephalous Fœtus.

Dr. WILLIAM DUNCAN: Tubal Gestation of nine weeks' duration removed successfully three hours after rupture.

The ballot for the election of officers for 1894 then took place, and the following were duly elected:—

President: Dr. Herman. Vice-presidents: Mr. Alban Doran, Dr. Hollings, Dr. Horrocks, and Mr. H. S. Webb (Welwyn). Treasurer: Dr. Potter. Chairman of the Board for the Examination of Midwives: Dr. Champneys. Honorary Secretaries: Dr. William Duncan and Dr. W. Radford Dakin. Honorary Librarian: Dr. Phillips.

The reports of the treasurer, of the hon. librarian, and of the chairman of the Board for the Examination of Midwives were respectively read and adopted, and votes of thanks were accorded to those gentlemen.

The PRESIDENT then delivered his annual address.

Dr. PLAYFAIR, in felicitous terms, proposed a hearty vote of thanks to Dr. Herman and hoped that he would allow the address to be printed and published in the Society's Transactions. This was seconded by Dr. WATT BLACK and carried by acclamation. Votes of thanks were also given to the editor of the Transactions and to the retiring officers.

OTHER METROPOLITAN MEDICAL SOCIETIES.

EPIDEMIOLOGICAL SOCIETY.—A meeting of this society was held on Jan. 31st, Dr. J. F. PAYNE, President, in the chair.—The adjourned discussion on the Aerial Convection of Small-pox from Hospitals was opened by Dr. W. A. EVANS, medical officer of health of Bradford, who showed maps of the district and plans of the hospital, in which, the windows of the wards being hermetically sealed, the ventilation was effected by means of an exhaust shaft, the incoming air being warmed and the foul air burnt in the furnace; but, though the delivery was 10,000 cubic feet per head per hour, the wards smelt "fusty," and the patients when convalescent spent much time in the corridors and the grounds. Though twenty-five cases occurred in Bradford in the autumn of 1892, there was no evidence inculpating the hospital; but in 1893 numerous cases appeared in the neighbouring streets, in the casual ward, and in the fever hospital adjoining. In September the small-pox patients were removed to a new hospital outside the town, when a few cases appeared in that quarter, but on the new building being burnt down a month later the sick were taken back to the old hospital in Leeds-road, which was henceforth used for small-pox alone. The fire and removal drew a crowd of spectators, a number of whom, as well as two of the firemen, contracted the disease. Vaccination and revaccination had been since performed by all medical men at the public expense, but small-pox had not died out altogether, its distribution and incidence pointing to the hospital as a centre of diffusion.—Dr. SEATON, referring to his report on the epidemic at Nottingham, where he was the medical officer of health, pointed out a fallacy incidental to spot maps representing an entire epidemic at one view. Such a map showed a marked excess of cases in the districts surrounding the hospital, but as a matter of fact these cases did not appear until the sixth month, after a number of patients had been treated at their own homes on account of deficient hospital accommodation. He admitted the extreme difficulty of tracing the origin of every case, but considered that the onus of proof rested with those who substituted a hypothetical convection for the well-established agency of man. He pointed to the absence of complaints in respect of the ship hospitals on the Thames, though thousands of persons passed daily within a very short distance. Mr. Power's conclusions, if fully acted on, would lead to the abandonment of isolation hospitals altogether, but Sir G. Buchanan had, as recently as 1874, attributed the diminution of the disease in Birmingham to the opening of the hospitals, and Leicester had shown to what an extent an epidemic could be postponed by isolation.—After some remarks by Drs. PRINGLE and BULSTRODE Dr. MAHOOD said that his experience at Birmingham had convinced him of the fact of aerial diffusion, as when cases occurred in the fever hospital, workhouse, gaol, and lunatic asylum in the vicinity of the small-pox hospital, the cases being nearly all unvaccinated, but several of them not having left the buildings for weeks or months.—Dr. NEWSHOLME agreed with Dr. Seaton in deprecating the practice of ascribing to aerial convection, without strict inquiry, every case the origin of which was not palpably due to personal contact. When the Stockwell Hospital was used for small-pox the spot-maps showed the usual concentration of cases around it, but on one side only, a railway on the other side presenting an impassable barrier to human intercourse

with the houses beyond, though it would rather have favoured aerial transmission. An important factor in the accumulation of cases around hospitals was that the houses erected in their vicinity were occupied exclusively by persons of the lower and less perfectly vaccinated classes.—The PRESIDENT, in closing the discussion, insisted on the impossibility of altogether excluding the factor of personal agency, since third persons and things might be the vehicles of infection in the most unsuspected ways.

PROVINCIAL MEDICAL SOCIETIES.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—Mr. JOHN APPLEYARD, President, occupied the chair at the meeting of this society on Feb. 6th, when Mr. HORROCKS introduced the subject of the After Treatment of Severe Operation Cases. Owing to anæsthetics the effects of shock, which were most noticeable in the very old or very young, were too generally neglected; they might be best met by brandy or opium by the mouth as soon as the chloroform sickness had subsided, by warmth, and, if necessary, by inhalation of oxygen. After hæmorrhage the slow intra-venous injection of several pints of sterilised (1 in 1000) saline solution, injections of hot water per rectum, and inhalation of oxygen were most useful. When ether had been chosen much bronchial irritation could be relieved by inhalations of steam with compound tincture of benzoin. In many operations about the upper part of the abdomen food had been given per rectum with good effect within ten hours in pelvic cases, but mouth feeding was best; nutrient suppositories might lie unabsorbed for hours after operation. Purgatives were probably useful in early stages of peritoneal effusion due to sepsis, but more harmful in plastic peritonitis and useless in advanced cases or general septic peritonitis.—Dr. ADOLF BRONNER read a paper on Intra-cranial Disease Secondary to Ear Disease. He said this affection was very common, many cases not being diagnosed, especially in children, and fits, convulsions, or tuberculous meningitis were recorded as the cause of death, the ear troubles being passed over. The mastoid cells, attic, and tympanum were all very close to the cranial cavity, the tegmen being often very thin, whilst the cavities varied much in size, so that every case of chronic ear disease was dangerous. In mastoid cases, when common methods of treatment failed, the mastoid cells must be opened. In children, in whom the full bony development was not completed, the petro-squamous fissure connected the middle ear and cranial cavity, and meningitis or other cranial symptoms were sometimes found, without very evident ear disease. Thrombosis was common in adults, but rare in children. Infective thrombus caused pigmentation and erosion of the adjoining bone. Differential diagnosis was easy in uncomplicated cases, but where thrombus, cerebral abscess, and meningitis might all be present the conditions might be very difficult to analyse. Seventy-two cases were operated on recently; some, apparently hopeless, had done well. The surgical outlook in this field was good, but most cases would never have required operation if the discharge from the ear had not at some time been neglected.—Specimens were exhibited by Dr. MAJOR, Dr. I. J. WOODS, and Dr. H. BRONNER.

CATHOLIC UNIVERSITY MEDICAL SCHOOL, DUBLIN.—A meeting of the Medical Society was held on Monday, Jan. 29th, Mr. A. ROCHE, Vice-President, being in the chair.—Dr. MCWEENEY showed specimens of the Small Intestine from a boy who had recently died at the Mater Misericordiæ Hospital from peritonitis consecutive to typhoid ulceration, with perforation of the bowel. Every stage of the development of the typhoid lesion was exemplified by the specimens, and attention was more especially directed to the minuteness of the peritoneal aperture through which fæcal extravasation had occurred. He also showed pure cultures made (1) from an enlarged mesenteric gland, and (2) from the peritoneal exudation in the case, and alluded to the difficulty of distinguishing between bacillus typhosus present in the glands and bacillus coli present in the exudation. The potato test and the power of producing fermentation in saccharine solutions were alluded to and illustrative cultivations were shown. The bacillus coli is possessed of special medico-legal importance, as it appears to be the infective agent in all cases of peritonitis originating from the intestine, whilst in peritonitis spreading from the female genital tract the infective *rôle* was always played by cocci. These facts might prove of special utility in deciding the origin of peritonitis in cases where illegal operative interference with the object of producing abortion was suspected. The hygienic importance of the bacillus coli was also very great, its occurrence in drinking water being a positive indication of fæcal contamination, and in Dr. McWeeney's view of equal importance with the recognition of bacillus typhosus, inasmuch as he regarded it as probable, with Aclong and others, that they were merely varieties of the one species brought about respectively by saprophytic or parasitic modes of existence. He had succeeded in detecting bacillus coli in pump water that had caused a severe epidemic of typhoid fever amongst a number of families. The only circumstance they had in common was that of using this water exclusively.—The VICE-PRESIDENT complimented Dr. McWeeney on his paper. He remarked that were the bacillus typhosus and the bacillus communis coli found to be the same it would raise most important hygienic questions. He considered typhoid fever to be a specific disease due only to a specific cause, and not merely to a number of common causes. He admitted that the bacteriological examination of water was most valuable as a guide, but it could not be relied on alone, to the exclusion of the chemical analysis and the history of the water—that is, its source and surroundings.—Dr. BLAYNEY mentioned the formaline vapour test.—Dr. MCWEENEY replied.—Dr. JOYCE exhibited two Brains of cases of Chronic Hydrocephalus. One patient died suddenly.—The Vice-President, Dr. Blayney, and Dr. Coffey joined in the discussion.—Mr. DEVITT read an interesting paper on the Treatment of Cholera.—The VICE-PRESIDENT said that preventive medicine had done much more to stay cholera than curative treatment. No disease better exemplified the adage that "prevention is better than cure." Sanitation and inspection had done much to prevent its spread and virulence. He mentioned the subcutaneous injection of water in the stage of collapse.—Dr. POTTER had seen thousands of cases in India. He relied much in the treatment on the external application of heat. Stimulants were useless.—Dr. ADYE-CURRAN had had some experience of cholera in India. He found the subcutaneous injection of ether useful in collapse.—Mr. DEVITT replied, and the society adjourned.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.—This society met on Wednesday, Feb. 7th. Professor ANNANDALE opened a discussion on Intra-cranial Surgery. The headings under which Mr. Annandale spoke, which was also the line intended to be followed in the debate, were published in the agenda of the meeting. After some explanatory and historical references, he took up, firstly, Operations for Exploratory and Diagnostic Purposes. The usually recognised principle was not to open the cranial cavity unless the symptoms pointed to some condition which experience showed might be remedied by doing so. He thought that in some cases this might be departed from, and he referred to cases in which the symptoms of general brain pressure were present and in which the cause of the pressure was doubtful. More than twenty years ago he had operated on such a case with marked temporary relief, and a similar case operated on about the same time by Sir Joseph Lister was quite cured. The second class comprised cases in which there was great pain unrelieved by treatment—there might be a history of injury without external evidence. He mentioned a case of this kind in which the treatment was perfectly successful, although no local lesion was found. He advocated incising the membranes and the brain if no abnormal condition was found in the bone. He dealt with, secondly, Intra-cranial Inflammation and Suppuration. (*a*) Traumatic. These cases were not so common as they used to be before the use of antiseptics. He mentioned a case of the kind in which a scalp wound suppurated and was followed by epileptic fits daily. The wound was enlarged, and a portion of necrosed skull was removed by means of the trephine, a quantity of pus escaping from between the skull and dura mater. The result was completely successful. When the symptoms were general the prognosis of giving relief was not so satisfactory, but he was of opinion that in some such cases operation would give relief. In connection with abscess the duty of the surgeon was to explore as thoroughly as possible, even if repeated openings had to be made. (*b*) Middle Ear Disease. He referred to the liability in this condition of the various well-known lesions following upon it. Localised brain symptoms were not usually localised in these cases, and the diagnosis depended upon the history of the case and general brain symptoms. (*c*) Idiopathic. The suppurative process might be diffuse or be in the form of abscess. He, thirdly, dwelt on Hæmorrhage. (*a*) Traumatic. Under this

division he gave the history of a man whose skull had been perforated by an umbrella rib and whose death took place from hæmorrhage due to wounding of a large branch of the middle meningeal artery. Where the symptoms indicated localised hæmorrhage trephining was clearly indicated as well as the removal of clot, and, even where the symptoms were general, trephining might be of use in relieving pressure. Even in fracture involving the base opening the skull ought, he thought, to be more frequently resorted to when the symptoms of compression remained. In all injuries to the skull operative interference might not only be useful in removing blood clot, but might also give exit to increased cerebro-spinal fluid which might be causing pressure. (*b*) Non-traumatic. He thought that there were cases under this head which might be benefited by surgical interference, sometimes by removing clot and at other times by relieving pressure and giving time for clot to be absorbed. He, fourthly, dealt with Epilepsy. (*a*) Traumatic. Under this head he considered cases due to irritation of various kinds. He mentioned a case of epilepsy due to a head injury received twenty-five years before, and in which, at the operation, a cyst was found and the patient was much relieved. He advised that cysts should be kept open for some time and thoroughly drained. When degenerative changes had taken place in the brain the results of operations would necessarily not be so satisfactory. (*b*) Syphilitic. Only where the symptoms were localised and had resisted medical treatment was operation to be advised in this class of case. (*c*) Developmental and Idiopathic. Under this head he considered the different causes which might induce epilepsy. Many of these were of such a kind that relief could not be expected from operation, but in some instances exploratory operations might be desirable. He thought that in some idiopathic cases which had resisted treatment operation might be beneficial, and that some so-called idiopathic cases might really be due to injury. In some such cases portions of brain had been removed. Fifthly, as to intra-cranial tumours reference was made to the uncertainty of the diagnosis in some cases, and the necessity of exploratory operation, so that this might relieve symptoms even when the growth could not be removed. He gave particulars of a successful case of tumour removed by himself. Sixthly, as to Microcephalus and Hydrocephalus. In the former portions of skull had been removed with fair success. In hydrocephalus operative treatment had proved to be very unsatisfactory. He had tapped such cases, but with little permanent benefit. Operation was resorted to late in such cases, and he asked if earlier operation might not be more successful. Seventhly, as to mental conditions. These were considered under the three heads of traumatic, general paralysis, and general. Two per cent. of cases of insanity were the result of injury. In general paralysis operation had not been successful.—Professor GRAINGER STEWART opened the discussion from the medical standpoint, and confined himself mainly to an account of some of the cerebral cases he had operated upon. His first case happened twenty years ago, being that of a man who had sustained a fall on the vertex, which was followed by severe headache and epileptic seizures an optic neuritis. Sir J. Lister trephined and the patient, who lived for two years after the operation, had no more headache or fits and the optic neuritis disappeared. His next case was a patient with cerebellar tumour with great pain; trephining relieved the pain, but the patient died as a result of the tumour. He next had a patient in whom there had been meningitis, in which he thought relief might be obtained by trephining, but in this he was disappointed. Another patient with a gliomatous tumour of the brain had a few days' relief from suffering after operation; and a case with paralysis of one leg and arm and aphasia was trephined. The case was one of internal pachymeningitis, and after the operation the patient could speak and walk, but the disease extended and death ensued. The next was a man who had become epileptic after a blow behind the ear. In this case a cyst was formed, but the operation was of no benefit. A case of troublesome epileptic fits was trephined at what appeared to be the most likely position of the lesion, but without good result. The next was a case of a tumour which had been operated upon with brilliant success. One or two other cases had not been much benefited. He thought that in cases where there was undue intra-cranial pressure and suffering in consequence they were fully warranted in trephining as a palliative measure.—Dr. MCBRIDE submitted a valuable communication from the standpoint of the aural surgeon.—Mr. BERRY spoke from the ophthalmological standpoint and referred to cases in which inflammation spread from the orbit to the meninges. He had only seen optic neuritis when there was tumour or abscess. He had seen a good number of cases in which injury to the back of the head had produced epilepsy and hemianopsia, and he had also seen cases in which without injury these two symptoms were present.—Dr. JOSEPH BELL considered that they trephined far too seldom. In cases of traumatism the results were exceedingly good. He had seen much of middle-ear disease at the Sick Children's Hospital, and his experience in abscess in these cases was a very disappointing one. In the diagnosis they were most to be guided by subnormal pulse and temperature. Temporo-sphenoidal lesions were more frequent than cerebellar ones. The results were bad, and it was usually found that there was much more disease in the cranium than had been expected. He referred to a case of microcephalus in which he had operated, the operation stopping the fits which had been present.—Dr. SMART referred to a case which had been trephined successfully in which he thought there had been basal hæmorrhage.—Dr. JAMES CARMICHAEL had tried drainage in several cases of hydrocephalus, but the results had been bad as regarded ultimate cure, but the symptoms had been relieved and life prolonged. Tuberculous meningitis cases died rapidly from intra-cranial pressure, and he suggested that surgical means should be tried in such cases.

MIDLAND MEDICAL SOCIETY.—The fifth ordinary meeting of this society was held on Feb. 7th, the President, Mr. A. H. EVANS, being in the chair.—Dr. PURSLOW showed an Ovarian Cyst with Twisted Pedicle. The patient was thirty-three years of age and had had six children. She had had an attack of pain in the abdomen and vomiting, lasting two days, one month before admission to hospital, but no other symptoms. On examination a tumour was seen reaching to the level of the umbilicus, principally on the right side of the median line. On vaginal examination a swelling could be felt on the left side and in front of the uterus, the latter being retroverted. At the operation the cyst was found to grow from the left ovary, to be multilocular, and to have undergone rotation from left to right anteriorly through one and a half circles. The lower and right side of the tumour was greenish-black in colour; the contained fluid was of the colour of porter, and there were extensive adhesions. The patient made an uninterrupted recovery.—Dr. J. W. RUSSELL showed a specimen of a Double Intussusception. The first invagination was of the ileo-colic variety and presented a sloughing apex; the second had occurred in the ileum about two inches above the former, which it had nearly overtaken. The condition of the patient, a child aged nine months, had not admitted of an operation.—Mr. GEORGE HEATON showed a large branched Renal Calculus. The patient, a woman aged thirty-three, had suffered from suppurative pyelitis for many years and died from suppression of urine. After death both kidneys were found to be dilated and in an advanced stage of calculous pyelitis. The dilated pelvis of each kidney was filled with a large renal calculus blocking the orifice of the ureter and sending processes into the kidney calyces. The specimen shown was removed from the right kidney. The main calculus weighed two ounces and consisted of uric acid covered on its exterior by a thick crystalline deposit of calcium carbonate. There was a number of smaller calculi in the calyces of the kidney.—Mr. CHRISTOPHER MARTIN showed a Dermoid Cyst removed from the cæcal region. The patient was thirty-eight years of age, married, and had had four children, the last seven months before the operation. Eleven years ago she first noticed, below and to the left of the umbilicus, a painless, hard swelling the size of a hen's egg. After her first confinement, seven years ago, it was found to the right of and below the umbilicus. She became subject to repeated attacks of sudden colicky pain, accompanied by violent vomiting and prostration. These seizures were more severe and frequent during her pregnancies. The last occurred twelve days before operation. On examination a globular, elastic, cystic mass, as large as a cocoanut, was found in the right lower abdomen. It was remarkably mobile. Per vaginam the uterus was found to be normal and had apparently no connexion with the growth. Mr. Martin opened the abdomen and removed the tumour, which proved to be a dermoid cyst containing fat, hair, bone, and teeth. It was apparently growing from the cæcum, the pedicle (which was twisted thrice from left to right) being formed by the enlarged vermiform appendix and its mesentery. The bloodvessels of the growth were entirely derived from those

of the appendix and cæcum. The only connexion it had with the uterus was by a long fibrous cord, which passed to the right cornu of the uterus and proved to be an attenuated twisted Fallopian tube. The patient made an uninterrupted recovery and had since remained in perfect health.—Dr. DONOVAN read a paper on Puerperal Septicæmia.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—At a meeting of this society on the 8th inst., Dr. ADAMSON being in the chair, Mr. A. A. MARTIN showed a girl aged seventeen whose breasts two years ago began to enlarge and within the last six months had grown very rapidly, so that now they were the size of a double football. The enlargement seemed chiefly to be connective tissue. The girl had never menstruated.—A case of Orbital Aneurysm was introduced by Mr. WILLIAMSON who showed a man who in 1870 had his head crushed. Within a few hours he noticed a loud noise in the head and within a few weeks a swelling developed, which had not since increased. It was clearly a case of rupture of the internal carotid into the cavernous sinus. There were two pulsating tumours separated like an hour-glass, one at the upper and inner part of the orbit and the lower separated from it by the tendo oculis. A murmur was heard all over the head. The eye projected and pulsated. If permission could be obtained he proposed to tie the common carotid.—Mr. BLACK showed two boys aged respectively seven and five on whom he had performed supra-pubic lithotomy.—Dr. C. L. LIGHTFOOT brought forward a case of Traumatic Detachment of the Retina from Sympathetic Ophthalmia. In June, after a slight accident, blindness ensued and the stump of the left eye was removed. In the right eye in July there was only perception of light. In September the field of vision was very defective. At this time spectrum green glasses were applied. In December the field of vision was enlarged and the sight was certainly no worse. In other cases of detachment of the retina he had seen good results follow the use of spectrum green glasses.—Dr. A. E. MORISON showed—(1) the Kidneys and Supra-renal Capsules of a woman who died from Addison's Disease; (2) Vermiform Appendix removed from a case of Recurrent Typhlitis after the third attack; nothing was to be felt before operating; and (3) Cæcum and Appendix removed after death. A short history of the case was as follows. On May 28th the patient was quite well; the bowels were moved by castor oil. On May 29th she was confined of her fifth child, the labour being difficult; sickness continued from the time of confinement; fæcal vomiting occurred on June 1st and death ensued. At the necropsy perforative purulent peritonitis was found, and behind the cæcum there was a gangrenous appendix.—Dr. OLIVER and Mr. WILLIAMSON showed—(1) a patient operated on for Sarcoma of the Ovary; and (2) a Cæcum removed for Cancer.—Dr. OLIVER showed a specimen of Sarcoma of the Skull. The scalp was injured seven years ago. Three years ago a tumour formed at the site of the scar, and afterwards disappeared, but subsequently reappeared. There were no symptoms till the tumour was punctured with a needle, when high temperature developed. The tumour then diminished. Optic neuritis was first detected in November, when there was no intra-cranial pressure. Fits occurred, after a succession of which coma developed and death ensued.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—The President, Mr. RICHARD FAVELL, in the chair.—Mr. ARTHUR JACKSON exhibited a Naso-Pharyngeal Polypus, which he had removed from a girl aged twenty-three, who had suffered from it for more than two years. On examination the tumour appeared to be composed of two parts, the upper part consisting of a gelatinous nasal polypus, and the lower part, which was intimately adherent to the upper, consisting of dense fibrous tissue. There was no bony attachment.—Mr. ARTHUR JACKSON also exhibited a specimen of Necrosis of the Lower End of the Femur, which had existed for twenty-six years, and was operated on twenty-two years ago and again three years and a half ago. Bursting into the knee-joint, it was found necessary to amputate. Mr. Jackson commented on the difficulty of successfully treating these cases, the frequency of eventually having to amputate, and raised the question as to the propriety of earlier amputation.—Mr. MAKEIG JONES showed a man aged forty, with Charcot's Amyotrophic Paralysis of traumatic origin, following dislocation of the humerus.—Dr. SOMERVILLE showed for Dr. HUNT a man aged forty-four with weakness of an arm and both legs, inability to stand with eyes shut, and exaggerated knee-jerk. The symptoms were discussed and the opinion expressed that it was a case of ataxic paraplegia.—Dr. WEARNE CLARKE showed the Temperature Chart of a case of Scarlet Fever in which (without the presence of any complication) the temperature, which had fallen on the fading of the rash to 100·8° F., rose again suddenly to 102·6°, and remained elevated for ten days. The recent paper of Bouveret was particularly referred to and the literature of the condition discussed.—Mr. MAKEIG JONES related a case of Cerebral Tumour. The symptoms were—severe pain on the right forehead coming on in paroxysms, slight ptosis and external strabismus of the right eye, vomiting, and double optic neuritis. A tumour the size of a hen's egg was found in the right frontal convolution growing downwards from the dura mater. Microscopic sections were exhibited showing the growth to be an endothelioma.—Mr. SNELL, Dr KEELING, Mr. ARTHUR JACKSON, Dr. SINCLAIR WHITE, Mr. PYE-SMITH, and Dr. BURGESS made remarks.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SURGICAL SECTION.

Fibrous Stricture of Œsophagus treated by Gastrotomy and Dilatation from below.—Interesting Cases of Gunshot Wounds.

A MEETING of this section was held on Jan. 12th, Sir W. STOKES in the chair.

Mr. KENDAL FRANKS read a paper on Fibrous Stricture of the Œsophagus treated by Gastrotomy and Dilatation from below. The patient, a young woman aged twenty-four, had suffered from dysphagia ever since she had had scarlet fever when seven years of age. The symptoms had during the past two years been progressively worse, and her weight was reduced from 8 st. to 5½ st. during the last twelve months. Bougies introduced had shown a practically impermeable stricture three inches above the cardiac orifice. On July 6th, 1892, the abdomen was opened in the middle line from the xiphoid cartilage downwards. The stomach, which was very contracted, was opened for about an inch and cleaned out, and the finger was introduced. The stricture was found three inches above the cardia. Otis's dilating urethrotome, without the blade, was passed along the finger through the stricture, and the latter was dilated first antero-posteriorly and then laterally. A bougie passed through the mouth emerged into the stomach, and by its means strong silk was drawn up the œsophagus to the mouth. A plug of gauze tied to this, with another silk ligature at the other end, was drawn backwards and forwards through the stricture, and was finally left in the stricture, the lower ligature being cut off. The stomach was immediately closed and returned to the abdomen, and the external wound was sutured. The plug was withdrawn in six hours. The patient made an uninterrupted recovery and was able to go out on the twenty-first day. Two months later the stricture readily admitted a medium-sized bougie. Dilatation, supplemented by electrolysis, was carried on at intervals. The patient, eighteen months after the operation, was in perfect health and had increased in weight from 5½ st. to 8½ st. Mr. Franks exhibited a table which he had prepared of all the cases hitherto published which he could find; they numbered twenty-one. Eight of these had been treated by the immediate method, the same as the case recorded. In the remainder a gastric fistula had been first established, and subsequently from one to four months' retrograde dilatation of the œsophagus, either by Hagenbach's or some other method, had been carried out. Mr. Franks argued in favour of the immediate method in all cases of impermeable fibrous stricture, except after extensive injuries involving a great length of the tube, when immediate dilatation would be impracticable. The operation was devised and first performed by Loreta of Bologna in October, 1883.—Sir W. STOKES said there were many points of surgical interest and importance in the paper. The first was as to the relative merits of gastrotomy and gastrostomy in cases where the retrograde dilatation was to be performed. The next was that for a case of fibrous stricture of the œsophagus of nearly over seventeen years' standing it was remarkably amenable to the treatment of dilatation. The last point to which he wished to allude was the difficulty of the operation of œsophagotomy in cases where the stricture occurred close to the cardiac end. By opening the œsophagus low down they would have as many

facilities for dilatation as through the stomach.—Mr. T. MYLES thought that there was nothing more difficult than to arrive at a correct diagnosis regarding obstructions in the œsophagus.—Mr. F. A. NIXON thought that the dilator should not be used as long as the finger could reach the stricture.—Mr. TOBIN said that among the various measures enumerated for the cure of the stricture no mention had been made of leaving in a tube for a considerable length of time with a view to bringing about gradual enlargement of the stricture.—Mr. WHEELER said that he could not agree as to the difficulty or danger of œsophagotomy.—Mr. M'ARDLE said that in performing the operation of œsophagotomy he had no difficulty, but he had a good deal in guiding a bougie through the stricture. He opened it high up on account of cellulitis having occurred where the opening in the œsophagus originally occurred. In dilating the œsophagus he found it easier to work from the mouth, and why operate when they had a natural opening above?—Mr. KENDAL FRANKS replied.

Mr. AUSTIN MELDON read a paper on Some Interesting Cases of Gunshot Wounds. A boy was accidentally shot, the bullet entering the abdomen to the right of the sternum at the lower end. Peritonitis and escape of bile followed. The fistula closed, and he was discharged in a month. A woman was shot in four places. One bullet passed through the muscles of the right arm; the second lodged in the wrist; the third entered between the umbilicus and spine and was removed from the groin; and the fourth entered to the right of the sternum, passed through the lung, and was found in the muscle on the left side. She recovered. In the next case a man accidentally shot himself. The bullet entered on the right side of the thorax, above the nipple, and passed into the lung. He recovered.—Mr. MYLES mentioned the case of a young policeman who was shot in the right side of the neck under the sterno-mastoid, and the wound healed perfectly. He had torticollis and was put under chloroform, when the spasm disappeared, but subsequently reappeared. He also developed paralysis of the right arm and all the time confidently asserted that the bullet was in his neck. His view was the correct one, for the bullet was extracted a considerable number of years later by another surgeon.—Mr. TWEEDY mentioned the case of a young man who shot himself while in the park and subsequently walked to the hospital. There was a hole below the right nipple and a lump on the side of the spine, indicating where, as they thought, the bullet was. He died of peritonitis, and it was found that the bullet had gone through both walls of the stomach.—Mr. WHEELER mentioned the case of a young man shot below the ensiform cartilage, who recovered. He had also been called to a case in Kilkenny, where an officer was shot through the temporal region, the bullet lodging in the brain. The patient had no symptoms save that he could not speak and that there were some twitchings of the face. He passed a probe and hit the bullet, but refused to operate on account of the absence of symptoms. The patient was now quite well. He next referred to a man who shot himself with a revolver on the side of the neck. The patient developed aphasia and paralysis of the right arm and leg. There was no aperture of exit, so he adopted no treatment, and the man became gradually well. His next case was one in which a man had shot himself in the gluteal region, and the bullet had travelled round towards the great trochanter. He removed it, along with the anterior and external portion of the femur. Another case was a penetrating wound of the lung, and whenever the patient spoke a hissing noise could be heard at the back of the lung. He also referred to a bullet found in the pericardium of a man who died in Baggot-street Hospital. The wound had been received at the Battle of Salamanca.—Mr. F. A. NIXON mentioned the case of a young man brought into hospital suffering from a very slight wound in the foot, with some discolouration. The patient was walking in a procession and thought that somebody must have trodden on his foot. The wound was dressed, and subsequently an abscess formed. At the bottom of it they found a revolver bullet.—Mr KENDAL FRANKS mentioned the case of a man who came to him to have a bullet removed from the frontal sinus. He had apparently held a revolver beneath the jaw and fired upwards; that was about two months previously. The track of the bullet was manifest. It had gone through the tongue, through the hard palate, and up through the left nostril, and had entered the left frontal sinus. The point of the bullet had impinged on the edge of some bone, because it was found split, and the bullet had turned completely round so that its apex was downwards

MEDICAL SECTION.

Cancrum Oris in Typhoid Fever.—Case of Associated Paralysis of the Right Portio Dura and Pneumogastric Nerves.

A meeting of this Section was held on Jan. 19th, Dr. W. G. SMITH, President, in the chair.

Dr. H. T. BEWLEY described a case of Cancrum Oris in Typhoid Fever in a boy aged fourteen years, who was attacked very severely. On the forty-first day of the disease a black patch was noticed inside the right cheek, and two days later another black patch was observed inside the left cheek. The latter soon healed, but the former was accompanied by much hardness and swelling of the cheek and increased till it involved the skin. Then the gangrene ceased to spread, and the slough rapidly separated. The boy during this process was very weak, but was given large quantities of nourishment and stimulants—12 oz. of whisky every twenty-four hours for ten days—and seemed to derive much benefit therefrom. The slough was very large and when it came away left an opening through the cheek of the size of a shilling, and a large cavity inside the cheek extending from near the angle of the lips to the ascending ramus of the jaw. The boy, however, made a good recovery, and the opening through the cheek closed completely in about six weeks. No contraction had yet occurred in the tissues. The stench, which had been very bad, Dr. Bewley thought, was most successfully kept down with local application of creolin and of eucalyptus oil.—Drs. BEWLEY and MOORE commented on the rarity of Cancrum Oris in Typhoid Fever.—Mr. DOYLE said that he had treated two cases of cancrum oris last year. He did not know whether they were recovering from fever, but he found them on admission to hospital with very decayed teeth. These he extracted, and he applied to the gangrenous surface in one of the cases hydrochloric acid and in the other nitric acid. The subsequent treatment consisted in cleansing the mouth with a large throat brush and spraying the cavity of the mouth. He also sprayed the interior of the nose and the back of the throat. As medicine he gave small doses of tincture of opium and found them to be very beneficial.—Dr. FINNY said that he had only seen the teeth and gums affected by extension from the cheek. He pointed out that the disease always began in the cheek, opposite the first molar tooth.—Dr. BOYD narrated an account of the treatment pursued in one of the children's hospitals in New York, where an epidemic of cancrum oris had broken out.—Dr. DAVIS suggested that, the opening of the parotid duct being situated near the position at which the ulcerations usually occurred, it was possible that it might afford a nidus for micro-organisms.—The PRESIDENT said that the local complications occurring in the mouth in acute fever were of three kinds: (1) severe ulceration; (2) acute periostitis; and (3) the gangrenous inflammation styled "cancrum oris." Dr. Bewley's case was interesting in that it attacked an older patient than was usual, that the disease occurred after typhoid fever, and that the quantity of stimulants taken by this boy in a short time had been very large. Alcohol, as it was oxidised into carbonic acid and water, was capable of being a source of energy to the body and thus a good—using this word in its widest sense. When more than a certain quantity was taken, part of it circulated unchanged in the body and was excreted as such. To this portion present in the tissues as alcohol might be referred—(1) its antipyretic properties, (2) its antiseptic properties, and (3) its action on the leucocytes.—Dr. BEWLEY, in reply, stated that this boy had had a very considerable quantity of opium throughout his whole illness. His teeth were not at all affected. He could give no reason why the disease began opposite the first molar tooth. He thought that the opening of the parotid duct had nothing to do with it, because in his case the duct was not opened, and no salivary fistula resulted.

Dr. J. W. MOORE read the notes of a case of Associated Paralysis of the Right Portio Dura and Pneumogastric Nerves. The patient was a girl aged thirteen years, who was subject to nasal catarrh. An attack of suppurative inflammation in the right sphenoidal sinus was suddenly complicated with right facial palsy, associated with paralytic dysphagia, necessitating feeding by the bowel exclusively and after a fortnight by the œsophageal tube. These paralyses were ushered in by symptoms of mischief at the base of the brain—viz., giddiness, headache, uncontrollable vomiting, and chills followed by high fever. These passed off in a few days, but foul-smelling discharge continued to flow from the posterior nares intermittently for several weeks,

and the breath was at times very fetid. The larynx also was paralysed on the right side. Inflammation seemed to have extended from the right sphenoidal sinus backwards towards the foramen magnum, and behind the dura mater, in such a way as to cause compression of the right facial and pneumogastric nerves, either indirectly at their points of origin or directly in their course.—Dr. PARSONS asked what was the condition of the patient's tasting powers.—Dr. R. A. HAYES considered that there was an empyema of the sphenoidal air sinus.—Dr. DAVIS thought that the nerve affected might have been the accessory portion of the spinal accessory.—Dr. FINNY thought that the simplest explanation was an abscess in the upper posterior part of the pharynx interfering with the seventh nerve close to its exit from the stylo-mastoid foramen.—Dr. J. W. MOORE, in reply, stated that both the motor and taste functions of the patient's tongue were perfect. There was no ear lesion or hyperacuteness of hearing. As regarded Dr. Finny's view, it did not seem to fully account for the early cerebral symptoms.

ANATOMICAL SECTION.

Exhibits.—Inaugural Address.—Case of Single Kidney.—Lobus Olfactorius Impar.

A MEETING of this section was held on Jan. 26th, Professor FRASER, President, in the chair.

The PRESIDENT exhibited enlarged photographs of Human and other Vertebrate Embryos.

Dr. R. H. WOODS showed specimens of Enlarged Turbinated Bones causing Obstruction.

Sir WILLIAM STOKES having taken the chair, the PRESIDENT delivered an address on the Position of Anatomy, in general, and certain problems in connexion with the Evolution of the Central Nervous System, in particular. There was also a lime-light demonstration illustrating anatomy from the morphological side (macroscopic, minute, and developmental).—Sir W. STOKES said they were aware that it was not customary in the Academy to discuss any points that might be raised in an inaugural address. The subject was one of special interest, still he thought it well not to deviate from their usual custom on the present occasion; but there was one thing that they could do, and that was to pass a special vote of thanks to the President for the learned, lucid, and original paper which they had just heard.—The vote was carried with acclamation.

Dr. H. C. TWEEDY exhibited a case of Single Kidney taken from the body of a woman aged thirty. The left kidney was greatly enlarged. The left renal vessels were normally placed, but were also larger than usual. The ureter was much wider and also apparently thicker than in the natural condition. No trace of kidney could be found on the right side, and careful dissection revealed no artery or vein, large or small, corresponding to the vessels supplying the existing kidney. No ureter was found on the right side. Dr. Tweedy drew attention to the rarity of this condition, only about 100 cases being on record; the proportion of females to males was about 1 to 4, and he quoted a statement recently made by Dr. MacDonald Brown that among 12,000 necropsies made in the various London hospitals only three cases of single kidney had been met with. The case was further worthy of notice in that no congenital defects were discoverable in other organs. Nor were there any indications during life that the condition existed. The patient died of cirrhosis of the liver, followed by peritonitis, and the cause of death was in no way connected with the absence of the right kidney.—Professors CUNNINGHAM, FRASER, and BIRMINGHAM having commented upon the interesting nature of the specimen, Professor PURSER inquired whether the broad ligament of the uterus had been examined on that side.—Dr. TWEEDY explained that no special examination had been made of the broad ligaments of the uterus, because at the time their attention was directed in looking for a special pathological condition.

Professor FRASER next made a communication on the Lobus Olfactorius Impar of Birds and Mammals. He said that it was well marked in the human brain, or at least the region that was taken for it. It was a hollow in the human brain which lay above the anterior commissure and between the two pillars of the fornix. It was named the recessus triangularis by Schwalbe of Strasburg. He had long been familiar with the condition in embryos, but it was only lately that it had been brought into notice by von Kupfer of Munich. It was of great importance, although of no size, and he had seen it in the whole of the vertebrate series.—Professor SYMINGTON thought that they needed some further proof that the part described by Professor Fraser was in communication with the olfactory bulbs.—Professor HADDON explained that in some lower forms the only opening to the alimentary canal was through the anterior part of the nervous system, and this might account for the little recess.—Professor FRASER said that he did not think it was a greater jump to conclude that the little recessus triangularis was a median olfactory lobe than the conclusion about the median eye. There was a median thickening of the epiblasts corresponding to the little projections from the median aspect of the brain, just as there was a lateral thickening of the epiblasts corresponding to the lateral nostrils. In his opinion it was a very erroneous and unscientific way to judge of the importance of a structure from the adult condition in which it was found.

Reviews and Notices of Books.

Atlas der Pathologischen Gewebelehre, in mikrophotographischer Darstellung. Herausgegeben von Dr. med. CARL KARG und Dr. med. GEORG SCHMERL. Mit einem Vorwort von Dr. med. F. V. BIRCH-HIRSCHFELD, Ordentlicher Professor der Allgemeinen Pathologie und Pathologischen Anatomie an der Universität Leipzig. Mit 27 Tafeln in Kupferätzung. Leipzig: Verlag von F. C. W. Vogel. 1893. [Atlas of Pathological Histology, from Microphotographs. Edited by Dr. Carl Karg and Dr. Georg Schmerl, with a Preface by Professor Birch-Hirschfeld, Professor of General Pathology and Pathological Anatomy in the University of Leipsic. Illustrated by 27 Etchings on Copper. Leipsic: Published by F. C. W. Vogel.]

THIS admirable and well-selected series of plates from photographs of microscopical preparations has just been completed by the issue of the final "Lieferungen," which have appeared at short intervals within the past few months. In the preface, which is contributed by Professor Birch-Hirschfeld, he points out the essential conditions necessary for the successful application of micro-photography to histology, and the advantages that accrue from this method of representation. There is no doubt that there are many difficulties to be overcome if the objects delineated are to serve their purpose fully. In the first place the sections must be as far as possible uniform in thickness, and the latter must be as much reduced as compatible, whilst the transference of the photograph to the plate is no easy matter if sharpness of definition is to be secured. The plates in this atlas have been printed on copper by the firm of Meisenbach, Riffarth and Co. of Berlin, and their delicacy as well as fidelity are striking. In an introduction dealing with the methods employed the authors state that the majority of the preparations were made by the use of Schaure's microtome, the specimens being hardened in perchloride of mercury and alcohol and embedded in paraffin. Hæmatoxylin was generally employed as the staining reagent, sometimes with a counter-stain of sapranin, but not of eosin, for it was found that a red tint absorbed too much light. The photographic processes were on the lines laid down by Korl and Zeiss, and under various objectives. The utility of such an atlas is well described by Professor Birch-Hirschfeld, who points out that although the study of these figures cannot replace direct observation, it is yet a most valuable corrective of the impression which each observer has of the object before him; and he remarks that the superiority of a micro-photograph over a drawing is the elimination of the personal impression and the reproduction of details which escape the eye in the conception formed by the observer of the general disposition of cells and tissues. There are in all twenty-seven large quarto plates, each containing from eight to ten figures, and we may say at once that we have seldom met with such good examples of micro-photography. The details are clearly defined, and consequently the atlas cannot fail to prove of great utility to the pathological histologist. The subjects are arranged systematically and cover a wide field, commencing with the structure of cells,

blood and pus, and then giving examples of the various forms of degenerative changes, atrophy and hypertrophy. Two plates are devoted to the illustration of thrombosis and embolism, whilst five give the changes induced by the inflammatory process in the bronchi, lungs, kidney, liver &c. A selection of pathogenic micro-organisms is followed by specimens of typhoid intestine, tuberculosis, actinomycosis and syphilis, and several plates deal with morbid growths. The atlas should prove as valuable to the teacher of pathology as to the student.

Les Maladies du Soldat: étude étiologique, épidémiologique, clinique, et prophylactique. Par A. MARVAUD, Médecin-principal de 1ère classe, Médecin-chef de l'Hôpital Militaire de Villemanzy à Lyon, Professeur-agrégé libre de l'École du Val-de-Grâce, Lauréat de l'Académie de Médecine. Paris: Ancienne Librairie, Germer, Baillière et Cie, FÉLIX ALCAN, Éditeur, 108, Boulevard Saint-Germain. 1894.

THIS elaborate treatise strikes us as being a very valuable work on the diseases incidental to the soldier and military life generally, and officers of our public medical services will find in it a fund of information connected with the medical history of the French army itself, both as compared with other European armies and with the civil population. The work is divided into five parts. The first deals with the maladies and mortality of the soldier under the different conditions of military life—in garrisons, camps, and on military expeditions—with a special view to the study of those diseases which are most frequently observed among soldiers. This is followed by a consideration of the infectious group of maladies, the general non-infectious diseases of a constitutional character, and diseases of a local and organic nature; the fifth, or last part, is devoted to the consideration of those maladies which may be termed accidental, in that they mainly depend upon the conditions environing the soldier, some of which he shares with the civil population and some of which are more especially incidental to military life, such as climatic disorders and alimentary diseases.

The opening chapters give a good idea of the prevalent diseases in the French and other armies during times of peace. Chapter 7 institutes a comparison between the French army of the interior and the other principal European armies from the standpoint of their predominant diseases. The author rightly says that the sickness and mortality of armies depend greatly upon two maladies—typhoid fever and tuberculous affections. In the succeeding chapter the influence of life in camps and the losses from disease and injury during war are taken up and illustrated by the results witnessed and recorded in modern warfare. Chapter 9 affords a brief classification of the diseases of the soldier grouped according to their pathological and hygienic affinities. The preliminary chapter of the second book, in which the etiology of, and prophylaxis in, the infectious diseases of armies are clearly set forth, is succeeded by an excellent and exhaustive consideration of typhoid fever. The experience of the French army in regard to this fever has been very large and varied, and the subject is treated in an interesting and, at the same time, broad and instructive manner. The facts connected with the experience of the French up to the present time are incorporated in the author's remarks, and, as we have, unhappily, ample evidence of the inefficiency and mortality which this disease causes in our own army stationed in India and elsewhere, it cannot be without interest for army surgeons to compare the views of the French with those of their own, and ascertain the hygienic measures that have been, or are being, carried out in the French army with a large measure of success. Of course, it could not be otherwise than that the results of the experience of the French are very parallel with our own in many respects, both being founded upon observations and statistical records extending over many years. The chapters on tuberculous diseases, the eruptive fevers, vaccination, cerebro-spinal meningitis (of which the French army has had much experience), stomatitis, malarial disease, diarrhœa and dysentery, and venereal diseases all contain interesting data. It would be impossible in the space at our disposal even to touch upon the numerous subjects that are considered and discussed in a work of this nature. We may safely say, however, that the information is well put together and clearly expressed, and that the work forms not only a voluminous, but a luminous, treatise on the diseases of military and naval life, with which the military and naval surgeons of other countries would do well to make themselves acquainted.

Les Centres Cérébraux de la Vision et l'Appareil Nerveux Visuel Intracérébral. Par le Dr. VIALET. Paris: F. Alcan. 1893.

THE need of an authoritative description of the intracranial visual centres has long been felt. When the "Graefe-Saemisch Handbuch" was published in 1874 a very short chapter sufficed to give all the more important facts that were then known. Since that time the experiments and researches of a host of observers have widely extended the limits of our knowledge of this part of the nervous system. It is now known that in the optic nerve at least three distinct sets of fibres are present—the direct, the crossed or decussating, and the macular. The direct fascicle occupies the external part of the nerve near the chiasma, but as the nerve approaches the globe of the eye it divides into two fasciculi, an upper and a lower one, situated at the periphery of the nerve. The decussating fasciculus occupies the inner and upper part of the optic nerve. In regard to the macular fasciculus, it is found immediately behind the globe to occupy the external and inferior part of the optic nerve, having its base external, and its apex towards the centre of the nerve. In the vascular part of the optic nerve it presents a crescentic form, the inner concavity of which looks towards the centre of the nerve, whilst beyond the entrance of the retinal artery it passes gradually towards the centre of the optic nerve. The direct fasciculus occupies, according to the concurrent testimony of all observers, the outer part of the chiasma. The position of the crossed fasciculus in the chiasma has not been certainly ascertained. The macular fibres in quitting the centre of the optic nerve run from above downwards and from without inwards into the chiasma. The position of the three sets of fibres in the optic tract is not certainly known, and, indeed, it seems probable that they are not distinguishable. Many lines of research have aided in determining the above facts, and the evidence derived from anatomy, physiology, experimental pathology, and clinical examination, is duly marshalled by Dr. Vialet. The intra-cerebral course of the fibres ministering to vision is described in much detail, and the reader will here find an excellent account of the occipital lobe, illustrated by numerous and well-executed plates, which, though a little rough, exhibit the chief features it presents. Dr. Vialet has paid particular attention to a fasciculus of association at the lower part of the occipital lobe, to which he has given the name of "the transverse fasciculus of the lingual lobule." He has accumulated a large body of clinical facts from which he draws his conclusions, but he very fairly gives also the conflicting and opposing evidence derived from this source. He expresses himself as being strongly in favour of localising the visual centre in the internal surface of the occipital lobe and considers that no observation has yet been made, at least none has been supported by microscopical evidence, showing hemianopsia consequent upon simple cortical lesion of the convexity of that lobe. The precise

limits of the cortical visual centre are: anteriorly, the parieto-occipital fissure; above, the upper margin of the hemisphere; below, the inferior margin of the third occipital convolution; and behind, the occipital pole. The centre of the visual sphere corresponds to the calcarine fissure, which agrees with its early appearance in the process of development. The author's observations, and the history of the cases he has collected, afford no support to the theory of Wilbrand that there are separate centres for space, colour, and light.

The work, as a whole, is a valuable contribution to our knowledge of the anatomical disposition of the central connexions of the eyes, and materially assists in defining their relations. Why is it that our French neighbours are so careless in their orthography of proper names? Here is the result of turning over a few pages. "Manthuer" for Mauthner; "Scharkey" for Sharkey; "Henshen" for Henschen; "v. Monakov," "v. Monakok," and "Monakoff" for v. Monachow; "Muller" for Müller; "Bürdach" for Burdach; "Vrolick" for Vrolik; "Gruveilhier" (a Frenchman) for Cruveilhier; "Nettleschip" for Nettleship; "Edgreen" for Edgren; "Grosshimrinde," for Grosshirnrinde; "Gehinkrankheiten" for Gehirnkrankheiten; "Laquer" for Laqueur; and "Munck" for Munk.

A Practical Treatise on Materia Medica and Therapeutics. By ROBERTS BARTHOLOW, M.A., M.D., LL.D., Professor Emeritus of Materia Medica, General Therapeutics, and Hygiene in the Jefferson Medical College of Philadelphia, &c., &c. Eighth Edition, revised and enlarged. London: H. K. Lewis. 1893.

WHEN a book has reached an eighth edition it has altogether passed beyond the power of critics and reviewers to do much good or harm by anything they may say about it. But we can honestly state that this is a good and really useful work and deserving of the popularity it has gained for itself. The author has evidently taken great pains by his additions and revisions to bring it up to our present state of knowledge. He explains that in doing this he has been brought face to face with the important question of admitting proprietary medicaments which, as a member of the Washington Revision Committee of the Pharmacopœia, he deemed it proper and expedient to omit from that work. The sphere and functions of the two works are different, however: the conservative course which is rightly adopted in compiling a pharmacopœia intended as an official guide for pharmacists and physicians is one thing, and a treatise on materia medica another. The demand for correct information relating to extra-pharmacopœial preparations is such that a text-book would be considered incomplete if it contained no reference to the more important of them at any rate, and the author has consequently given an account, more or less complete, of various members of the group. This new edition of Bartholow's Materia Medica and Therapeutics will, in our opinion, fully maintain its popularity with the profession as a highly practical and useful work.

A Dictionary of the Active Principles of Plants. By CHARLES E. SOHN, F.I.C., F.C.S., Member of the Society of Public Analysts. London: Baillière, Tindall and Cox. 1894.

THIS dictionary gives in concise and compendious form a list of all the alkaloids, bitter principles, and glucosides, adding also their botanical source and their chemical characteristics. The endless store of new facts now being accumulated in every branch of science is nowhere better displayed than in the particular section of organic chemistry with which Mr. Sohn's book deals, so that almost daily the necessity for some system of classification and tabulation has been growing more urgent, the task of hunting through chemical literature generally for information on these points having become very irksome. "Easy access to every fact contained in the book has been aimed at," says the author in his preface, to which we are pleased to be able to add that the mark has been successfully hit. In conformity with the system adopted by the Chemical Society, all the alkaloids are spelt with the final termination *ine*, while the glucosides and bitter principles end with *in*—this little rule explaining such apparent discrepancies as the appearance on the same page of caffe*ine* and amygdal*in*, cocai*ne* and salici*n*. This dictionary, and in particular the tabulated summary contained in its third part, should be so useful to the practical worker that it is a matter of surprise that the idea has not been anticipated.

The Latin Grammar of Pharmacy. By JOSEPH INCE, F.C.S., Lecturer in Pharmacy to the Pharmaceutical Society of Great Britain. Sixth Edition. London: Baillière, Tindall and Cox. 1894.

MR. INCE'S book has reached a sixth edition, and has well deserved the practical success that is thus implied. In this issue he has reconstructed and considerably enlarged the section dealing with the reading of Latin prescriptions, and by giving illustrative examples of every variety of medical formula, and by remodelling and adding to the vocabulary, has aimed at providing a real book of reference—"a compendium of Latin Pharmacy." A very large question is of course suggested by such a book as this—viz., whether the time-honoured custom of prescribing in a foreign tongue has any longer advantages commensurate with its disadvantages. Prescriptions in Latin can presumably be read by druggists wherever druggists are available; and they have the merit of being, as a rule, incomprehensible to the patient, who will thus be able to thrive on "morph. bimec." while assuring his medical attendant that he is idiosyncratically unable to assimilate opium. On the other hand, new and, we may certainly say, improved pharmaceutical methods demand from the medical man not only many new sets of directions, but individual directions in place of stereotyped. All can write "thrice daily" in Latin correctly, but it is not given to all to order in classical style "let a piece the size of a bean be rubbed on the swelling;" while elaborate instructions for the administration of solutions of tabloids hypodermically would be beyond the linguistic attainments of the majority. So that uniformity would seem to demand that the directions should be given in English, and certainly this is daily becoming a commoner practice. But the student is required to know the classical method, and in Mr. Ince's book he will find every possible information towards this object.

FOREIGN UNIVERSITY INTELLIGENCE.—*Moscow.*—Dr. Moroshouez has been appointed Professor Extraordinary of Physiology. *Pisa.*—Dr. Queirolo has been appointed Professor of Clinical Medicine. *Upsala.*—Dr. A. O. Lindfors of Lund has been appointed Professor of Midwifery and Gynæcology. *Valladolid.*—Dr. Simonena y Zabalegui of Santiago has been appointed Professor of Clinical Medicine.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.—A meeting of the council of the western division of this society was held on the 25th ult. at Southerton House, Hammersmith. A case of a member with regard to which the meeting had been specially summoned was taken into consideration. A resolution was afterwards carried: "that this meeting desires to express its appreciation of the efforts of the committee of the central council appointed to negotiate for the amalgamation of the London and Counties Medical Protection Society with the Medical Defence Union." The following names were added to the council of this branch, having been previously elected members by the central council: Mr. W. A. F. Bateman, Richmond; Mr. C. A. Patten, Ealing; Dr. F. Ernest Pocock, North Kensington; and Dr. Fred. Wadd, Richmond.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 17, 1894.

THE more fully the new proposals of the Royal Commission are considered the more clearly it is apparent that the medical questions which in former schemes were placed well in the foreground, have been thought by this Commission to be of but little importance. The attention of the Royal Commissioners has evidently been mainly occupied with the idea that something worthy of this great metropolis in the shape of a university to control the higher education in London was what they were expected to suggest. The medical members of the Commission were representatives of the corporations and universities and had but little sympathy with the movement for the removal of the existing disabilities under which the industrious and intelligent London medical student suffers. As we pointed out when the members of the Royal Commission were nominated, every institution, and therefore every individual interest concerned in the question of higher education in London, was represented except the medical schools of London, the medical practitioner, and the medical student. There are only three points in the report which appeal specially to our readers as medical men. These are the medical representation in the university, the suggestions for a concentration of teaching in the London schools, and for a combination of the existing examinations.

The medical teachers are so inadequately represented, both on the Senate and on the Academic Council, that they will be able to exert but little influence on the decisions of those bodies. They will have four direct representatives on a Senate of sixty-six members and three on an executive council of sixteen members. The practical working of this insufficient representation will be best shown by a consideration of the two questions which must arise as soon as the University is constituted. We are told in the report that there is a division of opinion among the Commissioners as to whether there should be an entrance or matriculation examination in the new University. This most important question is left for the decision of the University itself, and will at once come before the Academic Council, which has the direction of the curricula of study and examination. The General Medical Council insists on a medical student passing a minimum standard in Arts previously to registration, whilst the existing University of London enforces a most stringent matriculation examination on every candidate for its degrees. By most medical teachers this examination is considered an unnecessarily severe test of medical graduates, and the opinion of these teachers should have great influence in fixing the standard of the entrance examination for the future medical graduate of the new university. But under the scheme the faculty of medicine, who will be virtually the medical teachers of London, will only have three representatives in sixteen, and the important question to them and their students of the nature and standard of the matriculation examinations will be decided mainly by the views entertained by the representatives of the other faculties, more especially by those of Arts and Science, who form together exactly one half of the Council. Again, also by the regulations of the General Medical Council, after the preliminary examination in Arts an examination in Science should be passed before the student proceeds to the more technical branches of professional study. The Commissioners thus refer to this question: "It should be clearly understood that we do not think it desirable that a degree should be obtainable on the same terms as an ordinary licence to practise. A somewhat higher standard of knowledge, more particularly of scientific knowledge, should be required for the degree, and this it will be open to the university to require." It is therefore intended that the chief difference between the medical degrees of the university and the ordinary qualification for practice shall consist in this scientific examination. Here, again, the question of standard is all-important, for every medical student has now to pass an examination in physics, chemistry, and biology. The Academic Council, with eight representatives of the teachers of Arts and Science in a body of sixteen, will practically determine this question of standard, and so have the command of the portals through which every medical graduate in the new university will have to pass. The evils which have been found in the existing University in regard to these preliminary examinations will probably be perpetuated in the new one. Ten years ago, the University of London was asked by a representative body of medical teachers to reconsider and modify the two preliminary examinations, but its standard is as high now as it was then, and in maintaining this high standard it is supported by nearly every teacher of Arts and Science.

The suggestion of the Commissioners for the concentration of medical teaching in London runs thus: "In our opinion, however, it is very desirable that, with regard at least to the small medical schools, the teaching of physics, chemistry, biology, anatomy, physiology, pharmacology, and materia medica, pathology, hygiene and public health, and forensic medicine should be concentrated into one or two institutions." In other words, the smaller schools are to be transformed into clinical hospitals, and medicine, midwifery and surgery only are to be taught therein. We presume that the colleges and the larger medical schools are to continue with their teaching as it at present exists. The determining of such an important question as this is entirely in the hands of the Academic Council, for to this body is assigned the power "to recognise teachers in any admitted school of the university as teachers of the University, and to withdraw such recognition." The recognition by the university of the teachers in a medical school is an essential for that medical school, and the refusal or withdrawal of such a recognition would practically stop the teaching of any given subject in that school. The manner by which the concentration of medical teaching in London is to be carried out, is thus foreshadowed clearly enough by the Commissioners, and its execution is entrusted to a council of whom only one-fifth are teachers in the medical faculty. The paragraph in the report relating to the combination with the Royal Colleges and the Society of Apothecaries for examination purposes is as follows:—

"With regard to the examinations for degrees, we are of opinion that the University should have power to enter into arrangements with the Royal Colleges of Physicians and

Surgeons, for conducting in common examinations in such portions of the subjects included in the course for the degree as may be determined by common consent between the University and the Colleges. It is obvious that much would be gained by a combination which would prevent an undue multiplicity of examinations, without, on the one hand, tending to lower the standard of the University degrees, or interfering, on the other hand, with the licensing authority of the Royal Colleges. The fact that an arrangement with this object was actually agreed upon by the Senate of the London University and the Colleges in 1891 gives us confidence in believing that little difficulty will be found in arriving at a mutual arrangement satisfactory to both parties. No arrangement of this kind will in any way lessen or interfere with the duty of the University to satisfy itself as to the adequacy of the examinations in all respects. The Society of Apothecaries, being admitted to a representation on the Senate of the University, might be included in the arrangement for conducting examinations."

The inclusion of the Apothecaries' Society completely alters the situation from what it was in 1891. The arrangements then proposed by the Senate of the University were made with the Royal Colleges only, and new questions of professional status and of finance must arise if the combination suggested by the Commissioners be carried out. The proposals of 1891 were for the formation of a joint examining board to conduct the examinations in anatomy, physiology, medicine, surgery, and midwifery for the pass M.B. degree, and of a standing committee to consist of equal numbers from the University and the Royal Colleges to carry out these arrangements. As this scheme was rejected by Convocation the arrangements fell to the ground, and so the important question of finance was never reached. The fees for the examinations above named are at present twenty-five guineas at the Conjoint Examining Board and £10 at the University of London. Will either of these bodies forego its fees, and, if so, which? and will the Apothecaries' Society also require a share in the fees paid by the candidates for the degree? It must be remembered that the fees paid at the Scotch and provincial universities for examinations are low because they have no connexion with the professional corporations.

THERE is nothing kinder or more befitting in a man who has attained eminence in our profession, in any of its branches, than that he should now and again favour with his presence local gatherings of general practitioners. His leisure may be scanty; but this will only enhance the appreciation of his kindness. He may seem to speak somewhat theoretically on questions which do not affect him personally, but this will not deprive what he says of interest. It is enough that he is in sympathy with his profession in its broad aspects, that he is in touch with its members in all the variety of their difficulties in town and country, in city and suburb, that he is a man of clear mind and sound observation, and that he gives his own impression of facts as they strike him. What he says cannot fail to do much good by leading his audience to consider the subject-matter of his discourse and how far it is true or not in the sphere in which they move. This is the kind of service which was done by Mr. BRYANT the other day in his inaugural address on Some Subjects of Public and Professional Interest before the South-West London Medical Society.[1] He gave his strong approval to such local societies of medical practitioners both on account of the social advantages they confer in bringing men together who are apt to remain strangers to each other for a lifetime although practising in the same postal district, and of the professional advantage of the formation of a centre for the discussion of rare or difficult cases. There is far too little of this kind of intercourse, which is valuable in proportion as practitioners are distant from the great central societies of the profession.

With the exception of the important question of pupilage to a practitioner, on which there is some reason perhaps to think that Mr. BRYANT is not quite in unison with the general body of practitioners, there is scarcely a subject of interest to the profession which he did not touch firmly and with the expression of some decided opinion. The following are the topics with which he principally dealt: the working of public provident dispensaries; the conditions under which private dispensaries should be worked and sanctioned; the conditions under which country and town clubs should be worked; the good or evil influence of medical aid associations worked by laymen for their own profit; the duties of unqualified assistants; and the question as to how midwives—or nurse-midwives, as he preferred to term them—are to be educated and utilised for the public good. It requires some courage in a consultant to broach such delicate topics; but Mr. BRYANT had made up his mind on each of them, and gave his hearers the benefit of his opinions. One of the great points throughout his address was that the members of the profession in such societies should discuss such subjects and form a strong professional opinion on them, which would affect the public more powerfully than any opinions emanating from the General Medical Council or the Royal Corporations. He warned his audience against expecting too much from either of these quarters. He pointed out the limitation of the disciplinary powers of these bodies as defined by statute or by charter, and remarked that if this limitation is to be lessened it will only be by the harmonious action and demand of the profession itself. He went on to say that the disciplinary powers of his own corporation would by this time have been enlarged but for the opposition of "certain Fellows and ill-informed Members." There is much truth in Mr. BRYANT'S general contention that harmony of the profession will help to secure what is much needed, both by the General Medical Council and the corporations—namely, a larger disciplinary power. No one can reflect on the pre-occupation of political groups with party questions without seeing the hopelessness of interesting legislators in the promotion of objects of professional interest. The only hope of such legislation is in a united and dignified profession supporting its own corporations and the General Medical Council in asking for larger powers of discipline and in educating the public mind to perceive the importance of maintaining professional morals as being essential to the welfare and the protection of the public itself. Some of our corporations have no disciplinary function at all. None of the universities have the power to degrade one of their own graduates, and—what is still more singular—they do not seem to care much about acquiring the power. The powers of those corporations which have disciplinary functions and of the General Medical Council are very restricted. In

[1] THE LANCET, Feb. 10th, 1894.

spite of this, as Mr. BRYANT said, they are doing much every year to repress unworthy methods of practice; but he was right in contending that medical men in societies can do much to mould professional opinion and to uphold sound and right methods of practice. Above all, by harmony and reasonable support of their corporations they can do much to fortify the claims of these corporations for larger powers. If this support is not always forthcoming as we should like to see it, we may remind the corporations that they have not always treated their own members with that consideration which begets respect and support. This has been felt in various ways, and has tended to lessen the cohesion of the profession and its attachment to its representative bodies. There are signs of better relations and greater mutual support, which we sincerely trust will grow year by year. On one point there should be no reluctance to give the corporations all the support for which Mr. BRYANT asks—viz., in their efforts to raise the standard of preliminary education in the case of students entering the profession. There is no excuse now for not raising this standard. The standard of general education calls for it, the improved state of the schools of the country makes it practicable, and the proper study of medical science is impossible without it. The entry into the profession of excessive numbers shows the groundlessness of the fears of those who once thought that the profession might be starved in its numbers, and conspires, with other facts, to justify a high preliminary test.

We have left ourselves but little space to notice Mr. BRYANT'S remarks on the other various topics which he discussed; but we commend these remarks most heartily to the attention of the profession. He is opposed to "so-called private dispensaries" and in favour of public provident dispensaries for the wage-earning and poorer members of the community. He would restrict their use strictly to these, and would have the charges calculated in the case of families, not only on the wages of the member in whose name the family is admitted, but on the aggregate wages of the household. They should be managed by a committee of laymen, medical men, and representatives of the classes for whose benefit they exist. Town and country clubs should be encouraged. Mr. BRYANT is severe in his reflections on medical aid associations. He thinks that it is degrading to a medical man to be under a committee of "illiterate or even educated laymen," and to have to look after "any number" of members on terms concerning which he has no choice. He would bring them into line with public provident dispensaries or have them rooted out of professional work. He would restrict the unqualified assistant "to home duties, not far removed from those of a dispensing assistant." On the question of midwives he is explicit. He holds them to be necessary. Being necessary, they should be efficient for attendance on a natural labour and should know when true professional assistance is required. This efficiency he considers must be tested by an examination to be conducted by boards acting under the sanction of the Royal Colleges, composed of experts and general practitioners. He makes the excellent suggestion that they should be called "nurse-midwives," a name which would clearly distinguish them from any branch of the medical profession and define the limitation of their functions. Mr. BRYANT'S views will command general assent from their reasonableness and moderation. The South-West London Medical Society deserves the congratulations of the profession for making so good a start and its thanks for supplying it with so much sound material for reflection on knotty questions affecting medical practice among the working classes. We are clearly of opinion that every working man who can at all afford it—and there are hundreds of thousands such—does best to have his own private medical practitioner; but there are large sections of the community who must have the benefits accruing from combination. Without committing ourselves in any detail, we may say that the general principles upon which such combination can be honourably and satisfactorily arranged are well stated by Mr. BRYANT.

IT is generally believed that the dangers which may attend the use of anæsthetics are limited to the period of administration, and Dr. GUTHRIE'S paper on Some Fatal After-effects of Chloroform on Children[1] will, therefore, doubtless excite attention. Indeed, the subject is of the highest possible importance, for if Dr. GUTHRIE'S conclusions are sound, and the title given to his paper is justified, it may give rise to a sense of insecurity in the use of chloroform as an anæsthetic far exceeding that which the administration of any anæsthetic usually involves. For here we find recorded a series of ten cases of surgical operations within a comparatively limited period in the experience of one hospital, in which the mortality has, after a process of exclusion, been attributed by the writer to the effects on the organism of the drug employed to produce anæsthesia. This bald statement needs, of course, considerable qualification and examination of the conditions of the patients when subjected to operation; but even then it is startling enough, since the cases referred to were such as, in the exercise of all the aid given by modern surgery, were suitably treated by operative interference, from which the surgeon might have been expected to anticipate the best results. They are akin to cases daily subjected to like measures elsewhere, and it is reasonable to suppose that the results were no worse than the average.

That prolonged chloroform inhalation does produce organic changes in important tissues has been experimentally shown—e.g., by OSTERTAG, whose paper was criticised in our columns on its appearance.[2] He and others have found that the chief changes induced by it were of the nature of fatty degeneration, which was ascribed to the action of the chloroform upon the blood, the fatty changes involving not only the liver, but muscles as well, and notably the cardiac muscle. This action is akin, therefore, to that produced by phosphorus. No particular attention seems to have been paid to the subject from a clinical standpoint until the contribution by Dr. GUTHRIE, although OSTERTAG referred to the possibility of this cause of mortality after chloroform and believed that there were great variations in individual susceptibility to the action of the drug. In his closely reasoned argument upon these cases Dr. GUTHRIE points out that the patients were alike in being subjected to prolonged anæsthesia, and that in most of them the symptoms of the

[1] THE LANCET, Jan. 27th and Feb. 3rd.
[2] THE LANCET, Nov. 23rd, 1889.

fatal illness were of a cerebral character; yet he cautiously avoids the conclusion at which he ultimately arrives until he has discussed other possible causes for the untoward course of events. The risks of surgical operations embrace not merely those of nerve shock—too often, perhaps, invoked as an explanation of these and similar fatalities—but in these days also must be included the possible effects of poisoning from absorption of the powerful chemical agents employed for their germicidal qualities. Carbolic acid, iodoform, and corrosive sublimate have each of them been known to produce serious and even fatal results when freely used for surgical purposes. Dr. GUTHRIE, after dismissing the possible explanation of "shock," deals with these other alternatives and shows that, although in some cases evidence of free absorption of carbolic acid was obtained, yet in no one case were the symptoms altogether like those usually assigned to that substance. The letter from Mr. WATSON CHEYNE, published last week, shows clearly that the fatalities in at least four of the cases might be ascribed either to carbolic acid poisoning or to fat embolism, and we are glad to find that he dissents from the view adopted by Dr. GUTHRIE as explaining them. It is not quite so clear whether iodoform in one case and mercurial solution in the other may have been the cause of the symptoms which followed their use.

It must be confessed that Dr. GUTHRIE has propounded a thesis which is very difficult to prove, and his views, although most ably advanced and closely argued, can hardly be accepted as conclusive. The title of his paper is unfortunate in that it commits him to the position that the after effects he describes are due to the administration of chloroform. In his paper, however, he only advances the effect of the anæsthetic as one among many causes which might have produced the fatal results he chronicles. The works of UNGAR, STRASSMAN, THEIM, and FISCHER, to which Dr. GUTHRIE refers, and of MCWILLIAM, certainly go to show that the influence of chloroform when allowed to be inhaled for a prolonged period can produce remarkable changes in the muscular tissue. Further, mental excitement approaching to mania has been described by SAVAGE and others as an occasional consequence upon the use of this anæsthetic; but in all these cases there has been no period of apparent restoration to the normal mental balance. On the other hand, we may not forget that the animals which were poisoned by the use of phosphorus and then chloroformed in the Hyderabad experiments did not show any unusual reaction towards the anæsthetic. Possibly, if they had been kept alive longer, the symptoms Dr. GUTHRIE met with in children might have been seen. It is unusual for a patient who has once fairly come out of the influence of an anæsthetic to incur risks incidental to the inhalation. The action of chloroform is, we are bound to admit, a continuous one, whereas in at least some of Dr. GUTHRIE'S cases the symptoms of shrieking &c. only appeared after the influence of the drug had apparently passed away. Nor are the phenomena described by Dr. GUTHRIE like those which are constantly met with in children and adults after the prolonged use of chloroform.

The common fallacy of *post hoc ergo propter hoc* is encountered at every turn in the endeavour to attribute certain consequences to one act of several different antecedents; but, whether Dr. GUTHRIE be right or wrong in the extent to which he has assigned the influence of chloroform in those cases, he deserves thanks for bringing this important subject under notice. It is hardly possible for the matter to end here. It is not a mere record of some singular phenomena in the history of surgical operations. It is a grave indictment against the use of a most valuable adjuvant to the armamentarium of the surgeon. The subject demands most thorough sifting and a most careful scrutiny of all the facts—clinical as well as pathological—of those cases in which prolonged chloroform anæsthesia is employed. Taking the most serious aspect of the indictment against chloroform, it seems that it played only a fractional part in the result. We are told that the quantity of the drug used was measured in drachms, and even of this but a small amount would enter the blood stream. It is difficult to believe that such a minute quantity could produce so gross a lesion as that involved in fatty degeneration. And it must not be forgotten that the most marked cases of lardaceous and fatty disease are daily operated upon under chloroform without the occurrence of the symptoms Dr. GUTHRIE describes. The suggestion that the presence of a fatty liver should be held to contra-indicate the use of chloroform would be of more value if the ante-mortem diagnosis of that state was more easily made. We take it that in the majority of cases of chronic tuberculous disease the liver is fatty; but although chloroform may act more prejudicially in those who are the subjects of this lesion the possibility of its producing a more or less general fatty transformation, apart from any pre-existing tendency, cannot be lost sight of. It will be time to discuss its special influence in such cases, however, when the latter point is clearly and decisively settled. Once more we urge the need for research and inquiry, and invite the attention of our leading medical societies to a subject fraught with grave and important issues.

"TALENT," according to a famous definition, "does what it can; genius does what it likes": and the mighty surgeon whose loss the whole medical world is deploring was undoubtedly a genius. His mental vitality and energy were literally unbounded. The scientific and the artistic—the analytic and the creative—were faculties not only coexisting in him, but actually independent, owing their vigour and their outward expression or productiveness to the harmony with which they were kept in play. From the temporary exhaustion of one he would pass with renewed life to the exercise of the other, and be all the fresher for the alternation. After hours spent in the bacteriological laboratory he would sit down to the pianoforte and dream over the keys for hours more, the intensity of his previous occupation seeming to lend a profounder sentiment or a more aerial spirituality to his interpretation of sonata or nocturne. "BILLROTH," his pupils have been heard to say, "was never better in the operating theatre or lecture-room than after he had been assisting till the small hours at a dramatic representation or a concert in his own house." The severer the work awaiting him on the morrow the more deeply he would plunge into its emotional or intellectual opposite the night before, and *vice versâ*. He would weary

professional musicians themselves at the "Tonkünstler-verein" by his repeated calls for yet another performance, excusing himself for his insistence on the plea of the renovation it imparted, "nach all dem Jammer den ich den lieben langen Tag, das liebe, lange Jahr mit ansehe" ("after all the suffering I witness the live-long day, the live-long year"). And as with music, so with other branches of fine art. His garden and villa near Salzburg—gems of harmonious design—were all his own work; and this, the specialty of a landscape gardener and architect, he entered on as a relief from prolonged researches on fever or on the pathology of tumours, in both of which subjects he has left an epoch-making mark. Literature in its most classic, as in its most romantic forms found him equally interested and equally proficient, and many a poem and many a tale lies hidden in his desk (so say his intimate friends) to see the light on a fitting opportunity. When publication, however, was hinted at those who knew him best would make immediate answer, "not in his lifetime; he is the last man to compromise as a dilettante the name he has won as a nature-student." As a writer and still more as a lecturer his style revealed the scholar and the artist in finely balanced proportion. Perfect lucidity of phrase reflecting an equal lucidity of idea is conspicuous in his books as it eminently was in his prelections—his fastidious eye never admitting an ill-balanced period any more than his fastidious ear could tolerate a harsh collocation of words. In one of the most difficult and, at the same time, most delightful forms of literature he was a master—that of epistolary correspondence. Those of his letters we have been permited to see—notably the later ones he penned in his marine *villeggiatura* on the Adriatic—are among the most charming to be found in any language, and these, whatever may be the fate of his poems or tales, will certainly receive, as they most certainly deserve, no tardy publication. In them the whole man speaks out his whole heart and mind—from a mental and emotional constitution to which GOETHE'S words have been fittingly applied: "Was bedächtig Natur sonst unter Viele vertheilet, gab sie mit reichlicher Hand alles dem Einzigen Dir" (what Nature jealously distributes among others elsewhere she gave entire and with bounteous hand to thee alone). In these unpremeditated, felicitous outpourings of so complete a nature the world will share the delight attested by countless relays of pupils as well as by those literary and artistic votaries who had free entry of his house as guests. That house was once VAN SWIETEN'S, and under its new master had become celebrated throughout Christendom for its "noctes cœnæque deum," till seven years ago it was exchanged for EAMBERGER'S, the great physician, by his death, having vacated it for the great surgeon. On this abode BILLROTH lavished all his genius as draughtsman and colourist, chiefly in enlarging and decorating the music-hall, to say nothing of the dining-room, in which the charming entertainments of the evening were invariably wound up by a supper, at which he shone as a LUCULLUS or APICIUS. Delightful in society, he was never more so than under his own roof, for there the abounding kindliness of the man had its freest and fullest expression. It was indeed a beautiful life, that of the surgeon-artist, whose very recreations, in their refining and ennobling influence, served to reinforce the tender humanity that lavished on the inmate of the clinical ward or the private sick-room or the field ambulance a skill and a resource from which the medical world was glad to take lessons.

Annotations.

"Ne quid nimis."

THE RETIREMENT OF DR. DICKINSON FROM ST. GEORGE'S HOSPITAL.

THE retirement of Dr. W. Howship Dickinson from the active staff of St. George's Hospital on Monday last was the occasion of a demonstration of respect for their former teacher on the part of many past and present students. As the late senior physician went round his wards for the last time the number continued to swell ward by ward as the tour was made, so that in the end those on the outskirts of his following must have been unable to see either patient or teacher. Dr. Dickinson gave a short clinical demonstration on a few of the cases, and his remarks were eagerly listened to. He first showed a case of cardiac dropsy and dwelt in laudable terms on the efficacy of the pill prescribed at St. George's Hospital—now universally known as "Matthew Baillie's pill"—for this condition. The next case reviewed was one of recovery after severe tuberculous peritonitis in a child, in connexion with which he incidentally remarked that in his experience tuberculous peritonitis was not the extremely fatal disease that it was generally supposed to be, at least half the cases spontaneously recovering—at any rate, for a time. A case of chronic renal disease in a young woman aged twenty-one years served as an illustration of a hypertrophied heart which had commenced to show signs of secondary dilatation. A case of pertussis provoked the remark that two agencies generally wrought the cure of the disease—a good constitution on the part of the patient and time. The next case exemplified the difficulty of the diagnosis of mediastinal tumours, and Dr. Dickinson impressed upon his hearers the importance of an old adage of Sir William Jenner—namely, that without external pulsation it was impossible to diagnose definitely the presence of a thoracic aneurysm. A convalescent case of enteric fever served to illustrate the fact that fairly profuse hæmoptysis might occur in the course of that disease without any pulmonary lesion: the patient had considerable hæmoptysis on two consecutive days, and for some time the diagnosis between enteric fever and acute tuberculosis was a matter of more than usual doubt. A glance at a case of diabetes drew from Dr. Dickinson a reflection on the amount of good, and the equally large amount of harm, that could be done by medicine in this disease. This finished the last tour of the wards, which he has made daily for twenty years; but he was followed by upwards of a hundred of the younger generation of St. George's men into the board-room who were anxious to demonstrate to him their feelings of admiration and respect, and their gratitude for the unwearying and invaluable clinical instruction he had given them. To these gentlemen Dr. Dickinson then addressed a few characteristic words of farewell—farewell to the school, to his colleagues, and to his former and present clinical clerks. Comparing himself to the man in Matthew Prior's lines, he said:

> "'Now fitted the halter, now travers'd the cart,
> And often took leave, yet seemed loth to depart.'

'Loth to depart' I certainly am, gentlemen, for my work in this hospital has been one of the great pleasures of my life—to teach my clinical clerks in the wards, and to deliver my lectures in the medical school, where I have ever had so sympathetic an audience. I have often said very irrelevant

things, and I have been often personal, but I hope never scurrilous. Nevertheless, to work with St. George's men in St. George's Hospital has occupied the pleasantest hours of my life. I thank you most sincerely for the honour and kindness you have shown me to-day in accompanying me round the wards for the last time in such numbers; but I am not going to be sentimental, gentlemen, so I wish you all farewell, and thank you once again for your kindly God-speed. Good-bye." Dr. Isambard Owen, the present dean of the school, has been elected physician to St. George's Hospital in the place of Dr. W. Howship Dickinson; and Dr. Lee Dickinson, the son of the retiring senior physician, has been elected assistant physician. H.R.H. the Duke of Cambridge, a vice-president of the hospital, has accepted the presidency of a committee which has been formed to present a testimonial to Dr. Dickinson on his retirement.

HEROISM OF A "SHIP'S DOCTOR."

IN the published narrative of the recent dangerous voyage of the Atlantic liner *Cevean* no point is more striking than the credit given, and apparently with justice, to the ship's surgeon, Dr. Smith of Uddingston, near Glasgow. When in the gales which have lately prevailed the ship's stoke-hold was flooded, the furnaces were extinguished, the engines stopped, and the leak steadily gaining, the entire ship's crew and passengers being kept steadily night and day at the pumps, the "doctor" seems to have exercised quite an unusual degree of influence over those who for the time were under his orders. It is not often that medical heroism is thus acknowledged:—"At this work [pumping] we continued the whole afternoon and evening. Knocking off at 10 P.M. we formed ourselves into watches under the doctor and purser respectively, and then worked at the pumps with a will. All the afternoon and evening of Wednesday and till early morning on Thursday did we passengers work methodically in gangs under the bossing of the doctor, a young fellow of splendid pluck and endurance, though he looked not over-strong. His duty was to beat us up at every spell, and as he went about dressed like a collier or a fireman his own mother would not have known him. Under his leadership Jew worked with Gentile, Irishman rubbed shoulders with Pole, the Pole with the Yankee, the Yankee with the Dane, and the Dane with the German, and so on. No male passenger was allowed to rest, and at every spell the doctor had to hunt them up to take to the pumps again, seemingly much against his will, as all were thoroughly done up. It was pitiful to see the engine-room as the men lay around in heaps asleep, waiting to be aroused when their turn came to go back to the pumps again."

THE FUNGUS KINGDOM.

ON the 12th, 14th, and 16th of the present month Professor Charles B. Plowright gave, in the theatre of the Royal College of Surgeons, three lectures on the Structure, Development, and Varieties of Fungi. Professor Plowright has previously given some valuable lectures on the subject of fungi as food-stuffs, a report of which will be found in THE LANCET of Feb. 11th, 1893. We can give in this place only a bare summary of the lectures. At the present time students of natural science are expected to possess a certain amount of knowledge of the life-history of fungi, whereas within a recent period the mycologists in the United Kingdom could be counted on the fingers. The terminology of the subject is probably too elaborate, and it is in this way that the science is hindered rather than helped. The most trifling modification in structure and the minute variations in the manner of growth of plants are frequently designated, by several names. The mere ability to learn the meaning of the various botanical terms does not make the student a botanist. After giving an outline of the various structures of which fungi are formed and the principal modes in which their spores are produced. Professor Plowright described the phycomycetes, or moulds, a group insignificant in appearance and size, but which contain amongst their members some of the most interesting of the fungi, possessing in many instances the highest and most complex methods of spore-formation, culminating in the sexually produced spore. They include both saprophytic and parasitic species; amongst the latter are the fungi which produce salmon disease, the potato disease, and a condition known to gardeners as the "damping off of seedlings." On the human body favus and ringworm are conditions too well known to need more than allusion. Of the last-named disease, which is now known to be caused by at least two species of trichophyton, differing very markedly in the size of their spores, it was suggested as probable that further research would show that other species existed as human parasites, judging from the analogy of what happens with the parasitic fungi on plants. In the second lecture the axomycetes were dealt with. Some botanists include with these fungi the saccharomyces, one member of which (Oidium albicans) was familiar. Many plant diseases are caused by axomycetous fungi, such as the hop and vine mildews, the peach "blister"—an affection which is very destructive to the foliage of our peach trees,—the so-called "pocket" or "bladder plumbs," the canker of our apple trees, the larch disease, and the caterpillar Sphæria. Ergot was also derived from this growth. The lecture concluded with an account of the remarkable family of lichen-forming fungi. The third lecture was on the Basidiomyces, amongst whose members we find those important plant parasites, the uredineæ and ustilagineæ, the factors which produce the familiar diseases of our cereals—rust, mildew, smut, and bunt. The large family of the hymenomycetes, of which the mushroom is the most highly esteemed member, in our country at any rate, was also discussed. After an account of the gasteromycetes, or puff-balls, the nidulaneæ and the phalloidei, the lecture concluded with an account of that remarkable family of fungi, the myxomycetes, in the life-history of which so many points of resemblance to animal organisms are found that even the name mycetozoa has been suggested for them.

THE DANGERS OF OUR CALLING.

IT is with sorrow that we add to our annals of misfortune another record of a promising career cut short by one of the risks attached to the work of our profession. Mr. Lewis Burrow, a most able and painstaking senior student of St. Thomas's Hospital, while acting as post-mortem clerk in a case of suppurative peritonitis on the 1st inst., infected a small scratch upon the forefinger of his left hand. The place was carefully cleaned and no further trouble was anticipated, but on the third day pain and tenderness were felt in the forearm, extending to the axilla, and the temperature rose to 103° F. at night. At this time the original point of inoculation was quite healed, and there were no signs of lymph-angeitis or enlargement of glands. He was admitted into the hospital under the care of Mr. Anderson on the 4th. A puffy swelling had then appeared over the left axilla, with extreme tenderness to touch and severe pain on moving the shoulder; there was high fever, the temperature rising to 104° in the evening, but the pulse was strong and the tongue clean. Free incisions were made into the swollen parts, but without reaching any collection of pus. During the next two days the œdema spread to the neck and side of the chest, the affected area being acutely tender, but still without any sign of suppuration. The bowels, previously constipated, were acted upon, a very offensive motion being evacuated. On the 7th a low delirium set in and evidences of pleurisy appeared, first on the left side and subsequently on the right. The fever began to assume a typhoid

character on the 9th, and on the night of the 11th the delirium passed on to coma and Mr. Burrow died. The blood-poisoning was evidently of a very intense character, and the virus passed into the circulation without giving rise to a protective inflammation in the lymphatic glands. The septic œdema of the trunk did not appear until the fourth day, and to the end there was no formation of abscesses. It is singular that even in the early stage of the illness the unfortunate sufferer developed a conviction of his approaching death, and, while submitting courageously and gratefully to all the measures adopted for his relief, made his preparations for the end. Cases of this kind are terribly frequent, and unnecessarily so. It appears to be very important that the habitual use of protective gloves of indiarubber should be made the rule for all who are actively engaged in post-mortem examinations, and especially since experience has proved that after a little practice the necessary manipulations can be performed without difficulty and with almost absolute safety. The inevitable dangers of our calling are already too numerous, and it is sad to add to them this series of fearful calamities, which may be escaped, or at any rate minimised, by a simple precaution.

COAL DUST EXPLOSIONS.

ALL doubt that coal dust is the frequent cause of disastrous colliery explosions is set at rest by the striking experiments which are the subject of a report drawn up by Mr. Henry Hall, one of Her Majesty's Inspectors of Mines, by desire of the Secretary of State on behalf of the Royal Commission appointed to inquire into this subject. Experiments on a laboratory scale, notably those of Professor Thorpe, which have already been described in the columns of THE LANCET,[1] have demonstrated the extreme probability of coal dust igniting with explosive violence when freely mixed with air, as in well-ventilated mines, but the recent experiments recorded in the report referred to furnish evidence of a practical and conclusive kind since they were conducted in a main shaft placed at Mr. Hall's disposal by the proprietors of the White Moss Colliery, Skelmersdale, in which the working conditions of a mine in active operation were as nearly as possible realised. It is impossible to deal at any length with the very exhaustive series of experiments contained in the report, but the conclusions and recommendations which are appended are so important in connexion with the prevention of loss of life in collieries from the terrible explosions which unfortunately in recent years have shown little abatement in their frequency that we give a brief summary of the results. The flame from a blowing-out gunpowder shot in the presence of dry coal dust is always found to ignite more or less such dust and to increase the burning and charring effects of the shot. When a large flame such as that of a blowing-out gunpowder shot or the flame from the ignition of a small quantity of fire-damp traverses an atmosphere containing a very moderate quantity of dry coal dust, the dusty atmosphere will explode with great violence, and the explosion will continue and pass throughout any length of such atmosphere, its violence and force increasing as it progresses. The coal dust from several seams in certain different districts is almost as sensitive to explosion as gunpowder itself, the degree of sensitiveness increasing in proportion to its high quality and freedom from impurities. In mines which are briskly ventilated there is a greater probability of explosion, while in such cases it is generally more severe. One of the most important results of the experiments made has been to demonstrate that certain "high explosives" (roburite, ammonite, &c.) are incapable of igniting or exploding coal dust. Mr. Hall, in face of these facts, is therefore led to urge the total abolition of gunpowder from coal mines for blasting purposes and the substitution of certain "high explosives"—precautionary measures which many large firms have already adopted. Apart from the danger of using gunpowder arising from the ease with which it starts a dust explosion, it appears that in mere handling alone 400 lives have been sacrificed during the last twenty years, while the loss of life from explosions caused by gunpowder during the same time has been at least one half of the total loss—viz., 4098 persons. With regard to preventive measures every possible effort, it is recommended, should be made, either by watering the dry dust or removing it to avoid accumulation, so that any accidental ignition of fire-damp may be limited in its effects and prevented from developing into a sweeping explosion through the agency of dust. In view of the fact that the results of these experiments coincide in a remarkable manner with the facts in the previous history of the seams as regards explosion, there can be no doubt at all of the great practical value of the report, and the commission are to be congratulated on having selected Mr. Hall as their expert in this matter, he having exhibited unquestionable skill and tact in the carrying out of these most important experiments. The report is accompanied by some excellent and striking photographs taken at the time of the experimental explosions, and in some cases it is shown that the flame emerged some sixty feet above the mouth of the shaft when quantities of from 3 cwt. to 2 cwt. of coal dust were fired at the bottom of the pit by a cannon charged with 1½ lbs. of gunpowder.

[1] THE LANCET, April 2nd, 1892.

HOSPITAL v. HOME MORTALITY IN INFECTIOUS DISEASE.

WE have received from Dr. Hope of Liverpool a copy of a pamphlet prepared by him with a view of contrasting the mortality amongst patients treated at home with that of those treated in hospitals for infectious diseases. The Liverpool Hospitals Committee appear to have been much struck with the comments which have lately appeared in the lay press as to the alleged excessive mortality amongst fever patients at the Asylums Board Hospitals, compared with the mortality of those treated at their own homes. They have, therefore, most wisely directed their medical officer to investigate the whole question with the help of statistics derived not only from Liverpool infectious hospitals, but also from similar institutions in other large manufacturing towns, such as Manchester, Birmingham, Leeds and Sheffield, and, of course, the metropolis. After obtaining the necessary statistics from the various hospitals, and comparing them with similar data from the hospitals of his own city, Dr. Hope properly insists upon the observance of certain well-known precautions before accepting as conclusive the results of comparison between different groups of statistical facts. In particular, he draws attention to the disturbing influence of social conditions on the mortality of infectious disease in different localities, and he points out that in Liverpool, which he states to be "by far the most densely populated city in Great Britain," the population is far less favourably situated (in respect, we suppose, of density) "than London, which has a population to the acre only one half as dense." We must here digress for a moment in order to inquire what is the exact meaning that Dr. Hope attaches to the word "density." If he means that the mean density of Liverpool is greater than that of London the statement may not mean more than that London contains within its area a larger number of open spaces than Liverpool. What we want to ascertain for the purpose of comparing the two towns is whether in the poorer districts, which, as Dr. Hope shows, furnish the majority of the fever cases, the number of persons living on an acre in the one case exceeds that in another. Estimated in this way, we fancy that there are parts of London and of other great cities

also which would show an actual density at least equal to anything against which Liverpool has to contend. In the course of his remarks Dr. Hope animadverts on a subject which is of more than passing importance—namely, the fact that a large number of patients are sent to hospital whose complaints have been erroneously diagnosed, the mistakes being discovered only after admission to hospital. Thus, Dr. Hope says that amongst patients sent into London fever hospitals in 1892 certified to be suffering from typhoid fever no less than 44 per cent. were found to be suffering from complaints having no connexion whatever with that disease. In the case of diphtheria the proportion of errors was 12 per cent. of the admitted cases, in typhoid fever it was 26 per cent., and in scarlet fever it was 2 3 per cent. Although this aspect of the case does not directly concern the subject dealt with in the paper before us, nevertheless we feel bound to remark that if any scheme could be devised for creating a distrust of fever hospitals—and, for the matter of that, of hygienic measures in general—amongst the classes who are principally benefited by such institutions, it would be the general dissemination amongst the working classes of the notion that medical men were in the habit of sending into fever hospitals persons who, to the extent of nearly one half, were suffering from complaints other than those for which they were removed from their homes. Turning now to the subject of case mortality, we find that Dr. Hope has been able to collect figures which must be regarded as satisfactory. They certainly show that in Liverpool, taking the average of the three years 1891-93, hospital treatment of infectious diseases compares very favourably with home treatment. In the case of scarlet fever, patients treated at home died in the proportion of 9 per cent. of those attacked, whilst in hospitals the ratio was less than 6 per cent. The cases of typhoid fever treated in hospital died in the proportion of nearly 12 per cent. of the admissions, whereas the home patients died in the ratio of almost 19 per cent. With these facts before him Dr. Hope is fairly entitled to congratulate his Hospitals Committee on the results of their labours in the past and to refer to the statistics of the Liverpool institutions with the greatest satisfaction, furnishing as they do evidence that the patients treated within their walls have recovered from their illnesses in a far larger proportion than the patients who have been treated at their own homes.

FEMALE EDUCATION IN ITALY.

THE world is assisting at a spectacle as interesting as it is instructive—the vindication of woman's rightful place in Italy. It is a spectacle all the more unique inasmuch as the forces out of which it has arisen have been produced from within, owing to a strong and ever-hastening sense of the need, in public as in private life, of a rehabilitated manhood, capable of serving the State aright by developing power and patriotic spirit in order to meet the crises of a country becoming yearly more in want of truly virile leaders. Thirty-two years ago Italy, from being "a geographical expression," became a kingdom—more by masterly diplomacy, it is true, than by hard fighting. Her resurrection was so sudden that it may be said of her that she "awoke one morning and found herself a Great Power." But the stern preparation for the independent part she was expected to play in the international arena had been denied to her sons. The sifting process that years of combat in the stricken field impose on peoples rightly struggling to be free had never been hers; and so her public life was largely invaded by personalities of mediocre ability. Her stock of first-rate men was soon exhausted, and from decade to decade she has plunged deeper and deeper into financial complications and parliamentary confusion, till she now finds herself in the crisis out of which she is painfully emerging without a strong party and without a leader, cognisant, as she never was before, of the truth of D'Azeglio's words in 1861: "We have made Italy. We have yet to make Italians." It was in wise prescience of this dearth of first-rate men, and of the means by which that dearth was, in some measure at least, to be remedied, that the illustrious Signora Erminia Fuà Fusinato organised the Istituto Superiore Femminile—an institution which, from its original seat in Rome, would proceed to throw out branches throughout the provinces and, by training the mothers of the new generation, conduce to the better bringing-up and the purer and nobler development of their sons. It was part of her scheme to procure the co-operation of all that political, academic, literary, or artistic Italy could boast in genius, talent, or learning, and to employ the statesman, the university teacher, the man of letters, the *savant*, or the painter and sculptor in addressing the lady members of the "Istituto" on subjects they had mastered, or which they had enriched or illustrated by their lives or by their *chefs-d'œuvre*. Her appeal to the Bertis, the Tabarrinis, the Minghett'is, the Mamianis, and the Bonghis of the day met with the heartiest response. These accomplished and able men took their turn in addressing the lady audiences of the "Istituto" till their lectures, as long ago as 1873, formed the nucleus of a systematic and regular scheme for the higher education of the future wives and mothers of the "Italy that is to be." In fact, this has now grown to be a recognised influence in the development, educational and social, of the kingdom, and, as the "Società per l'Istruzione della Donna," it furnishes from year to year a steadily improving curriculum for the female mind of Italy, awakening it to its higher duties, ennobling its conceptions of life and work—fitting it, in a word, for the part it has never yet adequately realised, much less performed—viz., that of making the Italian home a preparation for the school and the university, and of aiding the successive Ministers of Public Instruction in raising the standard of qualification in every walk and in renovating the "Italian civilisation" at its fountain-head. Queen Margherite, true to the best traditions of her house, has taken the warmest and most active interest in the movement.

THE ADULTERATION OF BUTTER.

THE importance of the adulteration of butter, which forms so large an article of diet, cannot be lightly regarded. Whether the adulteration consists of foreign fats or of an excess of water does not matter. A very important prosecution has taken place recently in Manchester, where some dealers were summoned for selling butter containing 21 per cent. of water as certified by the city analyst. The prosecutors had such eminent men as Professor Long, Canon Bagot, and Sir Charles Cameron to support their analyst, and they agreed "that 15 per cent. of water was ample for any kind of butter to contain." The Chief Inspector of the Cork Butter Market stated that the amount of water should not exceed 16 per cent., and when butter containing more than 20 per cent. had been found in Cork Market the market trustees had prosecuted the seller for adulteration. Mr. Long went so far as to state that where the percentage was more than 20 per cent. the moisture must have been deliberately and artificially increased. Notwithstanding all this evidence the prosecution failed. Evidence was given to show that this butter did not contain 21 per cent. of water and that Somerset House allowed 18 and even 19 per cent. to pass. For the defence, Professor Tichborne was inclined to fix 20 per cent. of moisture as passable. Mr. Gibson of Limerick, who seemed to have most experience in the manufacture of butter, gave very interesting evidence as to the difficulty of getting water out of butter sometimes, especially in hot weather, and when the Irish farmer had not all the necessary appliances for the purpose, and this Captain

Sands corroborated. Mr. Gibson also told the Bench that there was no doubt a fraudulent way of making butter by improper application of hot brine for the purpose of keeping the water in. Mr. Headlam, the stipendiary, who had given a patient and careful hearing to the case, in dismissing the summons, stated: "On the whole, if the analysis of Mr. Harrington had agreed with that of Mr. Estcourt, he should have convicted the defendant, but, as it did not correspond, but reduced the percentage 2 per cent., he thought that he should make some allowance for the extraordinary heat of the weather at the time the sample was taken." For the good of the Irish butter trade itself, the sooner it is decided what percentage of moisture ought to exist in new butter the better, and there should be no difficulty about this. Evidently the Somerset House standard is too low. Mr. Estcourt, since the trial, has shown in the papers that the discrepancy between his analysis and Mr. Harrington's may have arisen through the long interval between each analysis.

MITRAL STENOSIS.

VOLUMINOUS as is the literature of heart disease, there are few areas in that field which have received more cultivation of late than questions affecting mitral stenosis. It is a lesion on the borderland of what was, until comparatively recently, a "region of romance"—namely, the nature and treatment of disease of the right side of the heart. This may in part account for the frequent discussion of mitral stenosis; another reason, and not, we think, a very valid one, for the multiplication of essays, is the tendency for observers who have had more or less extensive experience of a disease to come forward with their own impressions as with a new gospel, brushing aside with a few sentences the works of those who have preceded them. Not that we desire that investigators should examine any problem with other eyes than their own, but too often conclusions in no way novel appear to emanate from the most recent investigators. The human mind, travelling with average intelligence over the same ground, discovers the same facts in the same way as the ordinarily observant eye sees the same features in a landscape as other eyes which have looked upon the same scene. There are treatises overburdened with references. There are others in which such do not abound. *Peream qui ante nos nostra dixerunt.* Dr. Barr's paper[1] is of the latter order. He is of opinion that "much more information can be obtained from a careful study of individual cases than from a perusal of the hackneyed writings on the disease"—among which it is to be presumed the present interesting essay will in time take its place. Apart from these considerations, it is of use to learn the personal impressions of one who has had considerable opportunities of studying the disease. Dr. Barr, while not denying that it may occasionally be congenital, considers that it has usually a rheumatic origin. He finds it is more common among females than among males. It is slow in progress and quite compatible with a "fairly long existence." Tricuspid stenosis in association with mitral disease he regards in some cases as a "conservative lesion." He has usually found the "funnel form" in early life. While not overlooking the peculiarities of the associated murmur when present, he attaches greater diagnostic importance to the percussive phenomena and the evidences of impeded circulation in these cases. We are interested to find that he dwells at greater length than is usually done upon the aspirative action of left cardiac diastole. He refers to Goltz and Gaule as having first expressed the suction power of the ventricles in millimetres of mercury pressure in 1878. This was also independently done in this country in the same year in millimetres of water pressure with the dead heart. Dr. Barr has given considerable thought to the question of reduplication of cardiac action and has convinced himself that the phenomenon is due to a comparative asynchronicity of action in the two sides of the heart. The associated condition of pulse in which an apparent intermission may occur "is represented on auscultation by an irregular tumbling action of the heart, or a loud thump followed by one or more irregular rolling motions." He corroborates those who have found that digitalis increases this irregularity—as also caffeine,—and has observed it to be lessened by nitro-glycerine and atropine. After reference to the pulmonary and retrograde venous phenomena, and stating that in his experience dropsy frequently begins in the peritoneum in these cases, he speaks of his ability to gauge with tolerable accuracy the "size of the orifice" in mitral stenosis. He is in the habit of "weighing all the factors in each case and mentally estimating" this. He appears to have guessed with considerable accuracy in the cases he refers to. In the matter of treatment he makes a valuable practical remark (p. 89) when he states that he prefers strophanthus to digitalis in the treatment of mitral stenosis, but we gather from the general drift of his remarks that atropine and nitro-glycerine are the more appropriate remedies in these cases. We are glad on this point to find ourselves quite in accord with Dr. Barr. Intensity of engorgement may indicate bloodletting. He prefers bleeding from the hæmorrhoidal veins, blood aspiration of the liver, or even aspiration of the right auricle or ventricle to venesection; we do not gather, however, that he has actually employed these methods. In referring to those who advocate venesection he remarks that "it is often very apparent that the operator has got a very inadequate idea of any elementary principles to guide his action" (p. 90). Leeching he dismisses as "flea-bites." This is somewhat severe, but it would take us too far to discuss the subject at greater length on the present occasion. Dr. Barr concludes his paper with an account of three interesting cases of mitral and tricuspid stenosis.

[1] On Mitral Stenosis, Liverpool Medico-Chirurgical Journal, vol. xiv.

ALGERIA.

THE only exception we are disposed to take to Mr. William Sharp's article in the *Nineteenth Century* on "The New Winter-Land" refers to the adjective in its title, for Algeria has been a favourite winter resort with English people for at least twenty years. "The climate is, at its best," he informs us, "superior to that of Italy or the Riviera; the leading resorts are as easily reached as those in Sicily or Central Italy; travelling in the country is at once cheaper and more novel in point of interest; and the maximum of occidental sunshine may be safely calculated upon"; and he enters a *caveat* against the frequent comparison of Algeria with Egypt. But while commending the cheapness and advantages of Algeria he does not minimise the drawbacks. "Bearing in mind," he says, "how all-important for invalids are considerations not only of climate, but also of accommodation, food and cheerful environment, I should say that persons who are actually ill—persons whose quest is alleviation of their disease rather than prevention—should not stay longer than a month or six weeks in Algeria, even with a season climatically at its best, except at Algiers or Biskra, and for health's sake preferably at Biskra." Other resorts such as Hammam R'Ihra, Hammam Meskoutine, and Tlemçen he considers to be either too solitary for a prolonged stay or too entirely comfortless. Biskra is evidently his favourite spot. There, he says, can be enjoyed "the driest climate in the country, with the delightful and stimulating air of the Sahara, with many fascinating objects and places to visit, with lovely and varied drives and rides easily practicable, and with a bright, ever-varying and pleasant society." Here, it would seem, the "sun-bath cure" and the "rest cure" can be most

agreeably and advantageously combined, and over-strained nerves or diseased lungs may be placed under conditions the most favourable for recovery. With regard to travelling he has something to say beyond his eulogy of its cheapness. He affirms that "it is no whit more inconvenient than, and as little perilous as, in France." This is, on the whole, true, but we should advise the traveller in Algeria not to make the experiment of stopping at third-rate or little-known villages and railway stations—an experiment that is comparatively safe in France. The dangers to be apprehended are not those to life or limb, but simply of primitive, not to say barbarous, accommodation. Change of air and scene conduces to a "rest cure," but squalid discomfort will always more than counterbalance them. The result of a perusal of Mr. Sharp's article is to let us see that Algeria has considerable advantages for the phthisical patient, but that they have to be looked after a little carefully. The average of sunshine and fine weather is higher than on the northern littoral of the Mediterranean, there is no mistral, and the country presents much to interest the invalid—it is more of a true change; the invalid should not remain long on the sea coast, but should rather go south towards the desert, where the various resorts are better prepared for an influx of visitors.

COÖPERATION AMONG MALE NURSES.

IN an article in THE LANCET of Feb. 3rd we remarked on the fact that the care of the sick has always been an especial charge of women, and the grounds of their obvious fitness for this office require no explanation. Their skill and facility in attending even upon the illnesses of men have been often proved, and we would not wish to see any legitimate expansion in this direction restricted. At the same time we would by no means ignore the equally legitimate if more limited claims of their masculine fellow workers. For certain cases and kinds of illness among men the male nurse is virtually indispensable. The physical strength, mental obduracy or irritability of the patient, or the special needs of disease and treatment at times allow of no resource so natural or so efficient as he. We have in his very survival the gauge of his essential character and his approved fitness. Without subtracting anything, therefore, from the public appreciation which is due and is freely allowed to nursing women, we would claim for male nurses the same deserved privilege. It is, we consider, no more than just that their similar interests should be equally guarded. At present they lack this protection. Institutions of one kind or another which nominally exist for their benefit absorb, nevertheless, too large a part of their earnings—as much, we understand, as from 25 to 40 per cent. Some efficient coöperative system is required for them, and we feel sure that such an arrangement, if organised with reasonable care, would justify the encouragement of public opinion.

AGE LIMITATIONS IN PUBLIC HEALTH APPOINTMENTS.

WE are all familiar with a saying that if a man has not distinguished himself before the age of forty his chances of distinction have for ever vanished; but those of us who are at all conversant with the conditions of modern professional life know that the saying, if ever true, is not now applicable and that opportunities of distinction are often wanting until after that age has been passed. This being so, we are somewhat astonished to find that amongst the conditions laid down for the post of medical officer of health of Paddington a maximum age limit of thirty-five is fixed: a stipulation which will cause many a man, still regarding himself as young, to reconsider his relations to the world and his prospects of attaining to distinction in it. From this attitude of the Paddington Sanitary Committee it may be inferred, either that in their opinion a man worthy of being trusted with the public health of Paddington ought to have distinguished himself before the age of thirty-five, or that a distinguished man is not required for the post. Besides these specific inferences there is, we think, a legitimate but depressing generalisation to be drawn—if, indeed, the action of the Paddington vestry is to be accepted as an index of the mental attitude of sanitary committees throughout the country—i.e., that in the public health service a man should be in possession of a professional income of £600 by the age of thirty-five or for ever relinquish the hope of obtaining it. Fortunately Paddington seems to be alone in the position it has taken up, and in other places—such, for instance, as Manchester, where in the recent vacancy the minimum age-limit was thirty and the maximum fifty—more reasonable views prevail. Seriously, we are at a loss to understand this action on the part of the Paddington Sanitary Committee, and we imagine that some good men must have been precluded by such an absurd restriction from being candidates for the appointment. The post of medical officer of health of Paddington is one of no small importance to the metropolis as a whole, and an experienced man is required to fill it. Were the vestry advertising for an assistant to act under a senior man we could understand this age limit, but under the circumstances we should have been less surprised had the minimum limit of age been thirty-five, though far be it from us to advocate any such restrictions.

DIPHTHERIA AT TOTTENHAM.

THE deputy coroner for North-East Middlesex was quite right in holding an inquest in the case of William Tracy Richardson, aged forty-two, at one time auctioneer and lately clerk at a theatre, living at 28, Bruce Castle-road, Tottenham, who had died from diphtheria. He had only three weeks before removed from Canonbury. It is difficult to understand exactly how many cases of diphtheria had arisen in this poor man's family. Three of them were at Homerton Fever Hospital; we gather that one was at home; and one other had died at Hampstead Fever Hospital. The painful part of it is that not only could not one of the children and the father, who occupied the same room, be admitted into an infectious hospital, but the wife spent the two last days of her husband's life and 13*s.* in telegrams to the different hospitals in her ineffectual efforts to get them admission, and that he died in her absence, sitting up in his chair untended. This is a truly tragical story, and one that deserves the inquiry of the coroner. The father had taken the disease from the children. There seems every probability that the disease was contracted at Tottenham. It is not yet possible to say who was to blame for all this tragedy, or if anyone was. Some of our contemporaries write as though the results might have been different if the father had been admitted into a hospital. This is doubtful, as, from the evidence of Mr. Wainwright, it was a very serious case from the beginning. It would almost seem as if individual neighbourhoods would have to be compelled to make provision for their own diphtheritic cases, and that this provision should have to be of the most ample kind both as to cubic space and medical and nursing attendance.

THE INTERNATIONAL MEDICAL CONGRESS.

FROM Rome our own correspondent writes, under date the 12th inst.:—"Last night the Central Committee came to a final decision as to the labours of the Congress and the order in which they shall succeed each other. The inauguration will be solemnised in presence of His Majesty the King of Italy on March 29th. There will be many festive demonstrations, public and private, including a grand reception in the Capitol, the sculpture gallery of which will be thrown open and its *chefs-d'œuvre* of statuary, as on similar occasions, placed *en évidence* under the electric light, while the Platea

Archæologica (the Forum, the House of the Vestals, the Sacred Way, the Basilica of Constantine, the Arch of Titus, the Colosseum, the Arch of Constantine, and the Palace of the Cæsars) will be brilliantly illuminated. Thirty-two nations will be officially represented at the Congress by seventy-three delegates; 344 scientific "corsi" (lectureships) will also send representatives. The communications hitherto announced for (possible) reading and discussion are 2080. Among the chief personages in the science and practice of the profession there is hardly one—Italian or non-Italian—who has not intimated his intention of coming to Rome. The official business will be overtaken by April 5th, as already stated. I may add that among the excursions in contemplation after the rising of the Congress few will equal in attractiveness the three now being organised by the Balneological Society of Naples. Incidentally meant to show the members the rich resources possessed by the Neapolitan Riviera in mineral waters, the excursions will cover ground in which archæology has alighted on its most precious treasure trove, besides affording views of mountain, insular, and coast scenery unrivalled on the Mediterranean littoral."

GRATEFUL HOSPITAL PATIENTS.

THERE is plenty of abuse of the hospitals by patients who avail themselves of their open doors and their gratuitous terms. Probably it would be found that such abuse is more common in those who have no claim to be relieved gratuitously. It is pleasant to report an instance of gratitude. The *Evening News* publishes a letter by Thomas Tovey narrating how late one night, in circumstances of agony, he repaired to St. Thomas's Hospital and had all his wants respected and his agony relieved by a skilful operation. The consideration for his wants was so refined that when "the kind Sister of the Clayton ward" found he was a veteran smoker she "had him wrapped in blankets and wheeled into a smoking-room." We are not blind and undiscriminating admirers of our great voluntary hospitals. But they are too splendid an achievement of the voluntary principle to be lightly left to one-sided criticism. The correction of the abuses of the out-patient department and of the admission of those who can afford reasonable fees outside would leave them the finest institutions of civilisation under Christian conditions.

EPILEPSY AND ERRORS OF REFRACTION.

IN the current number of *Brain* Mr. Work Dodd deals with the question of the relationship between epilepsy and errors of refraction. An analysis is given of the results of examination of the eyes in 100 cases of true epilepsy, and a comparison is made with the refractions obtaining in apparently normal eyes. Of simple hypermetropia there were 28 cases per cent. less in the epileptic than in the apparently normal class. Of astigmatism of all kinds there were 26 cases per cent. more in the epileptic division than in the normal one, this difference being in great part made up by the increase in epileptics of compound hypermetropic astigmatism—viz., eighteen cases more than the normal percentage. If the difference of the 26 cases per cent. of total astigmatism in the epileptic be added to 42 cases per cent. of the simple hypermetropia of the normal class, the result comes to within 2 cases per cent. of the normal amount of simple hypermetropia—viz., 68 cases per cent. It would almost appear, Mr. Dodd says, as if the increase of astigmatism in epileptics was taken from the normal amount of hypermetropia. The conclusions at which Mr. Dodd has arrived are that, given a certain condition of instability of the nervous system: (1) errors of refraction may excite epilepsy; (2) the correction of the errors of refraction will, in combination with other treatment, in many cases cure or relieve the epileptic condition—in the 100 cases forty-nine patients were relieved or cured; and (3) that in some cases, when the refraction error has been corrected, the epilepsy will continue, generally in a modified form, in consequence of other irritation, even though the error of refraction may have been the exciting cause of the fits in the first instance. Mr. Dodd is strongly of opinion that in every case of epilepsy—in addition to general treatment and the investigation of other organs—the eyes should be carefully examined under a mydriatic with a view of correcting any error of refraction that may exist by the use of proper spectacles.

THE SALE OF ICE CREAMS.

SOME time ago we called attention to the decision of a Glasgow sheriff that a seller of ice cream should be registered under the Dairies Orders together with purveyors of milk. On appeal to the Court of Session this judgment has now been reversed. The desirability of registration and systematic sanitary supervision was not denied, but it was held that the present law could not be construed as giving the necessary power. The matter is certainly of considerable importance, and the defect in the law should be remedied at the earliest opportunity, which will come, we suppose, when Scotland obtains its long-talked of, but long-delayed, new Public Health Act.

THE DENTISTS' REGISTER.

THE Dentists' Register for the present year was issued on the 9th inst. and therefore comes to hand at a much earlier date than in any preceding twelvemonth. The work, which gives evidence of careful revision, contains the names of seventy-two additional Licentiates in Dental Surgery who have been registered during the past year. While the number of names of dentists in the United Kingdom, 4795, is nearly the same as that appearing in the Register for 1893, a further diminution is apparent in the number of those whose claims to registration existed in the fact of their having been in practice before July, 1878; but an increase is shown in the number of those registered on the production of a diploma. Of the former class there are still 72·95 per cent. on the Register, but the percentage of those holding a diploma now amounts to 26·48. A comparison of the present record with that contained in the Register for 1879, where the respective percentages were 90·87 as against 9·13, thus shows a great increase in the proportion of qualified dentists to the total number of gentlemen practising that branch of surgery. The Register also contains the names of twenty-seven dental practitioners who hold diplomas granted by the University of Harvard or that of Michigan, but the General Medical Council has decided that these qualifications are not at present registrable.

THE CORDITE CASE.

THE hearing of the recent action brought by the Nobel's Explosive Company against Dr. Anderson of the Government factory at Woolwich for an alleged infringement of Mr. Nobel's patent of 1888 for ballistite or smokeless powder has brought to light some facts in regard to the nature of explosives of more than usual interest. Thus it transpired that, although there are certain ingredients common to both explosives, yet the essential point of difference between them is that in ballistite the variety of nitrated cotton soluble in a mixture of alcohol and ether is used, while in cordite the insoluble nitrate is employed. Mr. Nobel's powder consists of nitrated cotton and camphor dissolved in nitro-glycerine and cast and granulated to the required size, a volatile solvent being used in the manufacture to aid solution, which is afterwards evaporated off, leaving behind a horny mass. In his specification it would appear that some importance is attached to the use of the soluble variety (di-nitro cellulose) in preference to the tri-nitro compound (ordinary gun-cotton), since the latter is more violently explosive than the former

and at the date of the patent was more dangerous to manipulate, especially if heat was employed. It is precisely these difficulties in regard to the sensitiveness to explosion of tri-nitro-cellulose which have been overcome by the discovery of cordite; in fact, as Mr. Justice Romer said in giving judgment, the patentees of cordite solved the problem which Mr. Nobel left unsolved—that is to say, they discovered how to make a good powder out of insoluble nitro-cellulose and nitro-glycerine. In view of these facts no infringement could be regarded as having taken place. The action accordingly failed.

THE DIFFUSION OF SMALL-POX.

IN the metropolis last week there were 15 fresh attacks of small-pox, but no fatal case was registered. The cases under treatment on Feb. 11th had fallen from 81 to 77, of which 12 remained in the Highgate Small-pox Hospital. A considerable rise over the preceding week was manifested in several provincial centres. Thus, West Ham had 24 cases, 1 fatal; Birmingham as many as 92 and 4 deaths, with 13 attacks in the Manor of Aston adjoining; in Nottingham the serious rise of a fortnight earlier was followed by 6 new cases; whilst at Oldham 20 attacks were recorded. Bradford again had 12 cases and 1 death; Bristol contributed 18 cases, and the suburban district of St. George 12 more; and several other towns had from 1 to 3 attacks. Whittington, not far from Chesterfield, has been the scene of a serious recrudescence of small-pox recently, and much alarm is felt locally at the turn events have taken.

GOLDEN WEDDING OF SIR JOHN TOMES.

ON the occasion of the golden wedding of Sir John and Lady Tomes an interesting ceremony took place at their residence, Upwood Gorse, Caterham, a deputation from the leading dental societies throughout the kingdom presenting on St. Valentine's Day an illuminated address, setting forth Sir John Tomes' great services to the dental profession by his original scientific work, which had gained for him the honourable distinctions of F.R.S. and F.R.C.S. (*ad eundem*), and labours in the promotion of the Dentists Act and in the foundation of the Odontological Society of Great Britain and the British Dental Association, and by his standard work on dental surgery. Sir Edwin Saunders, F.R.C.S., on behalf of the deputation, expressed in felicitous terms the hearty good wishes of all who had joined in the testimonial of honour and esteem. Mr. S. J. Hutchinson, speaking for the executive committee, explained the nature of a scholarship which had been established at the suggestion of Mr. T. A. Rogers in honour of the event, and which will hereafter be known as the "Tomes Scholarship" and will be open to all qualified dentists and given for original work in matters appertaining to dentistry. Mr. Brunton of Leeds presented Lady Tomes with a golden inkstand, a gift from the wives and sisters of some of the members of the deputation. Sir John Tomes, with much feeling, returned thanks.

THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.

THIS society has made a new departure in the mode of conducting its ordinary monthly meetings. Its growth has been so rapid that, for the convenience of its members, branches have been established in many parts of the country having their centres in large towns easily accessible to the members of the various branches. At each centre monthly meetings are held for the reading and discussing of papers. These branch meetings, and more especially that of the metropolis, having diminished somewhat the interest in the ordinary general meetings of the society and increased the difficulty of obtaining papers of value, it has been decided to substitute discussions on subjects of importance, selected by the council, for written papers. The first discussion, which was on "Vagrants and the Dissemination of Disease" (introduced by Dr. Armstrong and Mr. Sergeant), proved most successful and fully justified the innovation. On Monday next Dr. E. Seaton, the medical officer of the Surrey County Council, will introduce the subject of "Vaccination and the Laws relating thereto." The subjects selected for later meetings are: "Death Certification and Registration," "The Training and Qualification of Medical Officers of Health," and "The Etiology of Puerperal Fever." The last-named will be introduced by Dr. Herman, the President of the Obstetrical Society. The discussion of such important topics, introduced by gentlemen who are authorities on the subjects, cannot fail to greatly increase the reputation and usefulness of the society.

CHRIST'S HOSPITAL.

WE have much pleasure in printing in another column a letter from the medical officer to Christ's Hospital, in which he repudiates for himself and the Council of Almoners all idea of desiring to sanction any sanitary scheme that is not in every way calculated to place the school premises in perfect sanitary repair. He points out that the scheme of the school authorities provides for a thorough reconstruction of the drainage system upon plans and specifications that have received endorsement from an independent quarter, and we are very glad to learn—what, indeed, we never doubted—that the best will be done to ensure the safety of the boys at their old home that skill and knowledge can do. With regard to the new site, we understand that a report has been presented to the Council of Almoners by Mr. Rogers Field regarding the site near Horsham upon which it is proposed to build. The land has been purchased by the Council at the rate of £45 per acre. The soil is said to be of a clayey nature, and there are many other circumstances connected with the site which have made it necessary to employ an expert to report upon its suitability. The governors have on several occasions considered the report, which, we understand, is not altogether favourable to erecting the school on this site. The report at the last meeting of the Council came under consideration, and Professor Charles Kelly, medical officer of health for West Sussex, was officially appointed to inquire into and report upon some of the questions which have been raised regarding the suitability of the site.

MAGISTRATES AND THE PUBLIC HEALTH (LONDON) ACT, 1891.

AT Worship-street last week Mr. Bushby had before him a series of summonses taken out by the vestry of Shoreditch against the owner of some houses in that district, the chief question before the magistrate being whether the houses were properly protected from damp. Mr. Bushby referred to the difficulty with which magistrates often had to contend in deciding such matters, and suggested the name of an architect who should be asked, at the expense of the contending parties, to give a decision in the matter. This suggestion was accepted. Mr. Bushby has undoubtedly taken a wise course in this matter. Subjects are continually being submitted to magistrates which require technical knowledge, and it is unfair to expect them to apply to these cases more than the ordinary good sense which usually characterises their judgments. Both the Housing of the Working Classes Act and the Public Health Acts often impose upon the magistrate the extremely difficult duty of deciding the effects upon health of certain structural conditions—questions which not only require medical training, but prolonged and careful study and experience. This is unfair both to the magistrate and to the public. It is, moreover,

unnecessary that this condition should continue, for the knowledge which is needed is available, and all that is required is the acceptance of the principle of referring cases which is already recognised in the legal procedure of the country. It is much to the credit of the London magistracy that one of their number should have recognised the need of technical assistance in magisterial decisions, and we hope it will not be long before it is more largely available.

TRANSITORY PNEUMONIC APHASIA.

UNDER the above title Dr. Chantemesse recently read a paper before the Société Médicale des Hôpitaux. In the course of pneumonia, as in many infectious or toxic diseases, aphasia more or less permanent occasionally occurs. In pneumonia the phenomenon usually presents itself about the end of the second or third day, and is generally preceded by headache and giddiness, even to the verge of syncope. In some cases there is numbness or a sensation of pricking on the right side of the face and in the right arm. The aphasia may come on suddenly without loss of consciousness or there may be symptoms closely resembling a true attack of apoplexy. When the condition is established all the phenomena presented by a lesion of the third left frontal convolution are present. The intellect, which may be at first somewhat clouded, clears within a few hours. In some of these cases paralysis of the lower part of the right side of the face is noted; the tongue deviates to the right. There may also be complete right hemiplegia, but more often the paralysis is limited to the face, tongue and right arm. Sensation and the tendon reflexes are, as a rule, not affected. In severe cases various vaso-motor phenomena may present themselves, such as redness, œdema, and a rise of temperature over the paralysed zone. These paralytic complications do not seem to modify the course of the original disease, pneumonia, at whatever period of the attack they may occur, and they bear no relation to the acuteness of the attack. The aphasia is of short duration, lasting only for four or five days at longest; occasionally it disappears at the end of twenty-four hours. The facial paralysis, as a rule, passes off with the aphasia, but the paralysis of the extremities usually lasts for a longer period. The pathogenesis of these nervous complications is very obscure. One cannot imagine any grave organic lesion of the nervous centres, as recovery is so complete and rapid. Hysteria caused by the pneumonic toxines has been suggested, but Dr. Chantemesse regards this hypothesis as unlikely. Two other theories have been suggested—namely, that the toxic products act directly on the nervous centres or on the contractility of the cerebral vessels, so producing marked changes in the circulation, but Dr. Chantemesse does not venture to give any definite opinion as to whether either of these is correct.

ON the evening of Feb. 8th the members of the International Sanitary Conference were introduced by M. Barrère, the French Minister at Munich, to M. Carnot, the President of the French Republic, who gave them welcome in a few hearty words. They had come, he said, to accomplish a great task for the benefit of civilised humanity, and France had great reason to congratulate herself on being this year the country in which the deliberations of men eminent in the science of sanitation were to be held. He offered them cordial hospitality.

THE electors to the Downing Professorship of Medicine will meet at Cambridge on Saturday, March 3rd, when the place of Dr. Latham, who, as we have already announced, has resigned, will be filled. Candidates are required to send their names, together with twelve copies of testimonials, to the Vice-Chancellor on or before Feb. 26th.

LORD PLAYFAIR will deliver an address to the students of the London Society for the Extension of University Teaching at the Mansion House on Saturday, March 10th. The subject of his discourse will be The Modern Needs of Scientific Teaching.

MR. R. J. HARVEY GIBSON, who holds the lectureship in Botany at University College, Liverpool, has been appointed Professor. The endowment of the chair has been completed by the gift of £1000 from Mr. Holbrook Gaskell.

IT has been decided to grant the use of the buildings and grounds of University College, Liverpool, for the Congress of the Sanitary Institute, which will meet in that city in September next.

THE VACCINATION COMMISSION.

I.

THE Royal Commission appointed to inquire into the subject of vaccination has issued its fourth report. This report contains no expression of opinion on the part of the Commission itself, and is, indeed, only the evidence submitted to the Commission between July 9th, 1890, and July 22nd, 1891, so that the most recent evidence we have before us was given more than two and a half years ago. The present volume contains almost wholly the statements of those who are opposed either to vaccination or to the compulsory law, and prominent among the list of witnesses are the names of those who have been especially associated with the agitation against vaccination. We shall probably refer again to the grounds which these witnesses were able to urge as reason for their contentions; but at the moment we propose to comment on the evidence of the Right Honourable James Stansfeld, M.P., as especially deserving consideration.

Mr. Stansfeld has twice been President of the Local Government Board—the first time when the Board was first constituted, and again more recently. He has thus had an exceptional opportunity of becoming familiar with the administration of the Vaccination Acts, and his evidence was directed more particularly to the changes in the law which he held to be desirable with the object of diminishing the opposition which is now offered to the statutory requirement of vaccination. Mr. Stansfeld's position is that looking to the heavy balance of medical opinion in favour of vaccination there is a sufficient case for what he called "moderate compulsion." Sir George Buchanan, reporting to the Local Government Board in 1885 said, "To the physician who realises the power of vaccination, and who knows the malignity of the disease against which it protects, the notion of enforcing the acceptance of such a boon is distressful." The statesman, however, must take cognisance of the willingness of the people to submit to a compulsory law, and must consider whether the form of compulsion is calculated to bring about the end both physician and statesman desire, the protection of the population against small-pox. It is evidently with this thought Mr. Stansfeld has considered the subject, with the result that he is in favour of moderate compulsion.

Mr. Stansfeld's definition of this extent of compulsion does not help us very much. He referred to Mr. Forster's Select Committee and Bill without, however, bringing himself to that special method. It was there proposed that persons who have been fined twenty shillings or have been fined in two penalties of any amount should be exempted from any further proceedings; and Mr. Stansfeld, while admitting the inconsistency of thus having limited compulsion, thought

that the inconsistencies and objectionable features of the present arrangement are at least as striking as any such objection to the limitation of the penalty. The Royal Commission, as is well known, has already, and before the evidence before it is complete, recommended the abolition of multiple penalties, and unfortunately without suggesting any alternative which might, without being attended by the objections which attach to multiple penalties, secure that the payment by parents of a small fine should not buy the right to leave their children susceptible to small-pox. It is probable that, in declining to bind himself to the particular method of Mr. Forster's Select Committee, Mr. Stansfeld had in his mind the provision of a sufficient substitute, although he was not at the time prepared to advise the Royal Commission as to the particular form it should take. Fortunately, legislation has not followed with undue speed upon the hasty recommendation of the Commission, and it may therefore be anticipated that Parliament will direct its attention to this point when the opportunity for legislation occurs. The difficulties created by inequalities in the enforcement of the present law, Mr. Stansfeld thought, would become much less if this amendment were made. Boards of Guardians would, in fact, be more willing to resort to moderate compulsion than to a system imposing multiple penalties. Such compulsion while perhaps resisted by the conscientious objector who is not averse to a limited martyrdom, would be sufficient to overcome the idleness or carelessness which is probably a much larger cause of neglect of vaccination than is a deep-rooted objection to the operation. But another objection which Mr. Stansfeld takes to the present system is that of the supervision of the work of the public vaccinators by the Local Government Board and the system of awards. This objection appears to be directed not to any system of supervision, but to that which leads to triennial visits by the Board's medical inspectors. His suggestion is that if this duty were transferred to the medical officers of health of counties it would be more effectual, presumably because the inspections would be more frequent; and, in connexion with this subject, Mr. Stansfeld throws out a hint that some relations might possibly be established between the county health officers and the medical department of the Local Government Board. There is no doubt that the supervision of the Local Government Board has been directed to securing, and has successfully secured, a fairly uniformly high standard of vaccination throughout the country, and it would require some skill to design a system which would not introduce into the country an inequality in the standard of vaccination procedure not less objectionable than the inequality in the enforcement of the law which Mr. Stansfeld now deprecates. The system of awards is undoubtedly not ideal, but it has served its purpose of maintaining efficiency and in securing for those vaccinated at the public expense a higher degree of protection against small-pox than is always obtained by those vaccinated at their own expense.

It is probable, however, that it will be found convenient to confer upon county councils some power of control over the vaccination of infants born in their counties, and some justification for this licence may be found in the association of these bodies with small-pox hospital provisions, the result of recent legislation. Mr. Stansfeld's long experience of social questions, and the attention which he has devoted to the vexed question before the Royal Commission, will ensure that his suggestions will not pass unheeded.

AT a meeting of the Medical Defence Union this week 142 new members were elected.

CHOLERA IN LONDON, 1893.

I.

MR. SHIRLEY F. MURPHY'S report to the London County Council on the subject of cholera in London during 1893, together with Dr. Klein's report on bacteriological examinations made in connexion therewith will in many ways be a very comforting document to the inhabitants of London. It gives a detailed description of sixteen cases which had been assumed to be attacks of Asiatic cholera, but in some of which, on bacteriological examination, Koch's cholera bacillus was not present. Of the sixteen cases examined, in only four could Dr. Klein find cholera bacilli even on applying Dunbar's peptone culture method. In several of the cases organisms which looked somewhat like those of cholera were present when examined under the microscope. Dunbar's method, however, usually gives such accurate results that only those cases in which the special bacilli could with its aid be cultivated need be taken into consideration. Several of the cases described were evidently due to the ingestion of fish or shell-fish, probably not of the freshest, whilst one at least may have been due to the ingestion of diluted sewage. It should be noted that in three of the sixteen cases no bacteriological examination was made.

Dr Klein bases his diagnosis specially—(1) on the appearance of the stools and their microscopic appearances in the fresh condition; (2) on Dunbar's peptone culture of a portion of the stool or of the intestinal contents; and (3) on cultivation experiments and the appearances of the growth obtained on artificial culture media. He does not, however, give any results obtained by the inoculation of animals, a test which Professor Koch looks upon as being absolutely essential in doubtful cases. Where a diagnosis can be made without this proof it is of course, superfluous.

Referring to the numerous statements that have appeared in the lay and medical press, from which a conclusion has been drawn that "I have changed my opinion on this point"—that is, on the importance of the diagnostic value of Koch's comma bacillus—Dr. Klein says: "To show that such conclusion is contrary to fact, I may be allowed to recall what I stated in my articles on cholera that appeared in the *Practitioner* in 1886-87 which have been reprinted in book form.[1] On page 114 of this work: 'One thing, however, may be said with certainty—namely, that as far as our limited knowledge at present goes, in no intestinal disorder in man (except Asiatic cholera) have comma bacilli behaving in artificial cultures like those of Asiatic cholera been yet found in the intestinal examinations.' And on page 115: 'Hence I agree with the proposition that if in any case of diarrhœa the choleraic comma bacilli can be shown both by the microscope and by culture experiments, then the suspicion that it may be a case of Asiatic cholera is quite justified.'" Nevertheless, Dr. Klein goes on to say: "Whether cases in which they (the particular comma bacilli) cannot be demonstrated by the above tests are or are not cases of true Asiatic cholera, cannot, in the present state of our knowledge, be satisfactorily answered. It is on record that experienced observers, who have devoted attention to this very point, have had before them cases which, clinically and pathologically, presented the characters of Asiatic cholera—cases which occurred in localities and at times when true cholera was rife (in Hamburg, in Russia, in France and elsewhere),—but in which no Koch's comma bacilli could be demonstrated." He is very doubtful as to the value of negative results, in this respect being in direct opposition to Koch, and in fact to most other observers. It is evident, indeed, that Dr. Klein accepts the presence of Koch's cholera bacillus as pathognomonic of cholera, but if he cannot find the bacillus he will not commit himself to the statement that he is not dealing with a case of cholera. Were the stages at which the bacilli are not found mentioned, this no doubt might be accepted without question, as the cholera bacilli undoubtedly disappear or become much less numerous in the later stages of the disease, but until this is settled—and assuming that the cases are examined during the stages in which the bacillus is usually found in undoubted cases of cholera—it will be assumed by most that the cases in which no bacilli were found were not cases of Asiatic cholera. This is the most

[1] The Bacteria in Asiatic Cholera. Macmillan.

comforting theory, and it certainly appears to be the most tenable. Altogether, the report is an exceedingly valuable one, and will be read with considerable interest by those who study the reports of the medical officer of health; and could it have a wider circulation it would prove very reassuring even to those who are fully convinced of the efficiency of the methods adopted by our sanitary officials to prevent the spread of cholera.

THE FISH-SUPPLY IN SCOTLAND.

AT the Scotch Office on Saturday last Sir George Trevelyan received a deputation from the corporation of Edinburgh on the subject of the Fisheries (Scotland) Bill. It was urged by the deputation that Edinburgh, not being a seaboard county, had only a consumer's interest in fishery questions, and ought not in justice to be made specially liable for a share of the costs to be incurred under the Bill. The deputation considered that the grounds for making Glasgow thus chargeable were much stronger than those for mulcting Edinburgh, yet the former was excluded from the Scotch Bill. The Secretary for Scotland, in reply to the deputation, pointed out that Edinburgh was interested in a very high degree in the operations of the Scotch Fishery Board, and gave, as an example of the work to which the capital of Scotland might well be expected to lend powerful coöperation, the inquiries that are at the present moment being made into the abuses of trawling and the influence of trawling upon the fish-supply. We quite agree with Sir George Trevelyan that questions concerning the methods to be employed for the maintenance and regulation of a proper supply of fish to our markets are of such importance that it would have been wrong to allow Edinburgh to be relieved from her share in the responsibility; and that these questions are interesting and not a little momentous was well shown by the eleventh and last annual report (1892) of the Fishery Board for Scotland, which was issued at the end of last year.

In this exceedingly interesting Blue-book one fact, obvious enough to those who know, but not in any way general knowledge, was made very patent. The sea can be over-fished. The fisheries of Norway, Denmark, Belgium, Holland, France, Spain, Canada, and Newfoundland alike furnish proof of this, and the report of the Scotch Fishery Board reveals the celebrated fisheries of Scotland as suffering in many places from a like rapacity. Scientific experiment and statistical investigation agree in demonstrating that we do not possess in the sea an inexhaustible storehouse of food, but that, on the contrary, fishing operations conducted upon a large scale can disturb the balance of ocean life. During the past generation immense improvements have taken place in the efficiency of the machinery of capture; but certain fish do not only remain scarce, but grow scarcer, and the fact that the decrease in the numbers caught has been practically commensurate with the increase in the number of beam-trawlers goes to show that it is the supply of fish which is at fault. An indication of this failure in the due relation between supply and demand has been present with us for one or two years now in the high prices obtained for soles in particular, but also by turbot and plaice. These prices have been generally credited to the caprice or astuteness of the middleman, but that they have been due to a real decrease in the annual catch due to a real decrease in the number of fish to be caught seems to be conclusively proved by the report. In the area of the Firth of Forth and in St. Andrew's Bay, where the Government trawling investigations were conducted with the most regularity, while a slight decrease was found to have occurred in the general abundance of fish all round, the falling-off was much more marked in flat fish than in round fish. The explanation of this difference is made more or less clear by some very practical experiments into the migration of fish conducted by the Commissioners, the details of which during four years of working are fully set forth. The plan adopted was simple in theory, but not without its working difficulties. A certain number of fish were caught, accurately marked, and set free, and the fishermen along the coast were informed that a reward would be paid to anyone forwarding a marked fish to the headquarters of the investigation. The difficulties were entirely incurred in persuading the fish to retain the marks. One example of the results that the Commissioners have published, with the deductions that they have made from those results, will show the thoroughness of their work, and will indicate also how valuable it may become to the community. Of 1250 plaice marked and liberated 103 were recovered, the average time of absence being 239 days, and the average distance between the point of release and the point of recapture 6·15 miles. As the size of the fish when set free had been accurately noted for comparison upon recapture, it will be seen that the Commissioners thus had all the material before them on which to frame some theory of migration among this species. The following were the broad conclusions arrived at: (1) that plaice tend to remain within the inshore waters during the period of immaturity; (2) that while they may travel twenty miles in about a year or so, their movement is as a rule slow; and (3) that their movements take a definite direction from their spawning grounds. The cycle of life in the plaice may be held to be summed up by these conclusions, which also give us a clue to the reason why plaice, and, for that matter, other flat fish, suffer from over fishing more than the round varieties. The extent of their migration is restricted. Their rate of growth and attainment of sexual maturity is slow. "Hence," in the words of the Commissioners' report, "the reproductive capacity of the species within a given area and period is relatively small, and the destructive operations of man may bear a large ratio to the normal destruction from natural causes."

Fish is not only an important item in the diet of the invalid, but it is a most valuable food for all, and the *rationale* of a diminution in its supply has a distinct importance to the medical profession, and no less so to the practical economist, to whom the question must appear as a very nice problem. We all know that fish inland is always very expensive. In great towns this may not be so noticeable, but it is none the less the case, and everywhere else the price demanded for fresh fish is so high that to eat it regularly becomes in the eyes of quite a large number of persons an unwarrantable act of extravagance. We do not allude to places so far removed from the beaten tracks that fresh fish must of necessity be unattainable because the methods of communication do not suffice for its delivery, but simply to the country at large, which is in average touch by railway with the seaboard. In the case of certain flat fish this high price bears quite a normal relation to the amount captured; but in other fish, notably in herrings, we know that the catch is often enormous and that it is the market that fails the fisherman. Several examples are given of this in the report. With regard to the Eyemouth district, the Commissioners say that never in the memory of the oldest fisherman in the district had such great shoals of herrings continued on the coast. They were, it is true, of poor quality, and their capture was entirely unprofitable, as the greater portion were used for manure. In the Stonehaven, Aberdeen, and other districts the same fate appears to have befallen a large proportion of the captures, the fish being sometimes of good quality and in sound condition, but the local markets were glutted. We are familiar with the same occurrence along our English coasts. And that, of course, is the problem. If fish is wanted very badly in one place and at another so little that it is not infrequently used as manure, to put it very vaguely, there must be something wrong; though to talk equally vaguely of nefarious middlemen and extortionate railway rates will not set the matter right. But in our opinion such work as that done by the Fishery Board for Scotland is all in the right direction. The abnormal condition of the fish market is clearly due, among other things, to the capriciousness of the supply, and what is required to ensure a regular supply is a knowledge of the habits of the fish. When a forecast of large captures can be made, we may be certain that efficient methods of transit will be forthcoming.

MEDICAL EDUCATION IN WALES.

THE inauguration at Cardiff on Wednesday last of the medical school of the University College of South Wales and Monmouthshire is an event of no small importance and significance. Taken in conjunction with the recent foundation of a University of Wales, this first step in the formation of a medical faculty undoubtedly marks an era in the history of education in the principality, a history which was

succinctly sketched by Sir Richard Quain in an admirable address which he delivered on the occasion. That the President of the General Medical Council should have taken the leading part in the ceremony was most fitting and appropriate both from his official position and from his long and devoted services to the cause of medical education.

Sir Richard Quain, after commenting upon the deplorable condition of education in the principality prior to Mr. Forster's Education Act, pointed to the action of the late Sir Hugh Owen, Lord Aberdare, and Sir George Osborne Morgan in founding the University College at Aberystwith as the first step towards systematising intermediate and higher education in Wales. This step had been fortunately followed up, and two new university colleges, respectively at Bangor and Cardiff, have been founded by voluntary contributions and handsomely endowed by government munificence. Sir Richard Quain next gave the precise objects that the Court of Governors had in view in establishing a medical school at Cardiff. These, he said, were to improve medical education generally by inducing a larger number of students than at present to undergo a sound academic training as part of their professional course, and to aim at the higher degrees of their faculty; to facilitate the entrance into the profession to the youth of Wales; to improve thereby the provision for medical attendance of the industrial classes of South Wales, especially in Welsh-speaking districts; and to enable a large number of Welsh students to pass the earlier years of their course within reach of home influences. He next briefly alluded to the enormous progress that medicine had made of late years, and to the commensurate improvements that had taken place in medical education. He could remember the time when the period occupied by the final and only examination qualifying a man for a diploma by the Royal College of Surgeons of England was one hour—half of which was devoted to anatomy and the other half to surgery. There was no general preliminary examination and no examination in medicine or midwifery, materia medica, and chemistry. The student who passed this brief examination received the title of "surgeon," but practised any department of the healing art that he chose to select. An examination by the Society of Apothecaries occupied about the same length of time, and questions were asked in the practice of medicine, materia medica, and botany. Here also there was a preliminary examination, in which the candidate was required to translate given portions of certain medical classics. Many candidates passed both these examinations, but a large majority passed that of the Royal College of Surgeons. He then compared the time spent on examination in those days with the time now occupied by the Conjoint Board in the examinations for the double diploma of the Royal Colleges, and incidentally alluded to the remarkable medical progress that had been made by London University. Sir Richard Quain concluded his interesting address by demonstrating at some length that all these improvements in medical education have common objects—the relief of suffering and the cure of disease; and that the medical profession were practically relieving suffering and curing disease he considered proved by the fact that the general death-rate had declined.

The college to which this valuable addition has been made has already an established reputation in arts and science training, for many of its *alumni* have taken high degrees at the London University. A recent addition to its sphere of work has been the establishment of classes of engineering, which have been planned on a complete and costly scale; whilst the new class-room and laboratories for the medical faculty have been built over the original building, which was formerly the Cardiff Infirmary. To Dr. Edwards belongs the credit of first mooting some nine or ten years ago the scheme that was inaugurated this week, and the munificence with which he practically enforced his ideas was followed by equally generous contributions from Dr. Price of Cardiff. Dr. C. W. Thompson of Hampstead, and a large number of members of the profession in Cardiff and South Wales, and other well-wishers of the project. It redounds to the credit of the medical profession that they should have individually done so much to promote this work, and now that the scheme has become an accomplished fact there will, we doubt not, be abundant evidence that the general public, for whose ultimate benefit such a school is intended, will rally to its support, and furnish the necessary funds for carrying on the work until it becomes, as it certainly will become, self-supporting. The spirit in which the College Council have set about this extension of their educational sphere is exemplified in the excellent appointments made to the newly-founded chairs of anatomy and physiology. In Professor Hughes and Professor Berry Haycraft (who commenced this week his course of Milroy lectures at the Royal College of Physicians) the college has gained two teachers of distinguished talent, who have entered on their duties with energy and enthusiasm if we may judge from the admirably planned and well-fitted dissecting-room, laboratories, and class-rooms which have been arranged under their supervision. These buildings were thrown open to inspection at the close of the inaugural ceremony, which was presided over by Lord Windsor and attended by Lady Aberdeen, the Hon. Miss Bruce, Archdeacon Griffiths of Llandaff, Drs. F. T. Roberts and Isambard Owen of London, Mr. Edmund Owen of London, Drs. Long Fox, Markham Skerritt, and Witham of Bristol, Professor T. Jones of Manchester, Mr. Latimer, the President of the South Wales Branch of the British Medical Association, and a large number of the members of the medical profession and of the general public. The day's proceedings were brought to a close by a banquet in the Town Hall, Dr. Edwards presiding, the company numbering upwards of 160. The toast of the "Medical School of South Wales" was proposed by Sir Richard Quain and responded to by Professors Haycraft, Hughes, and Dr. Sheen; and that of the "University of Wales," given by Mr. A. Thomas, M.P., was replied to by Dr. Isambard Owen, Dr. White of Bangor, Principal Roberts of Aberystwyth, and Principal Jones of Cardiff. The proceedings, which were throughout most enthusiastic, were further enlivened by music, including songs by Dr. F. T. Roberts and Dr. Cranwell Jones.

In congratulating our Welsh *confrères* on the success which has so far attended their efforts to promote higher education, of which this medical school is one of the most important and valuable results; it is legitimate to look forward to the time when the curriculum at Cardiff may be extended to fulfil all the requirements for medical graduation. The amount of available means of clinical instruction in such populous districts as those of South Wales may, under proper organisation, be one day put to good use. Meanwhile the first step has been taken, and there is no longer need for the Welsh student to seek instruction in the medical sciences outside the borders of his native land. In the promotion of this work much is owing to Principal Jones, to whom many well-deserved tributes were paid in the course of Wednesday's proceedings, and much also, as we have said, to the medical profession of South Wales. That the "new departure" is likely to be crowned with the success it merits cannot be doubted, for it meets a distinct want and will prove a boon to the coming generation of young Welshmen, who will be able to receive their training without the trouble and expense of studying in English or Scotch schools.

TOWN REFUSE AS FUEL.

TOWN refuse promises soon to be no longer the *bête noire* of the sanitary authorities of our towns or to remain a nuisance to the community. Indeed, so satisfactory is the progress being made in the improvement of appliances, with a view not only to the sanitary disposal of refuse or its complete destruction by fire, but also to the utilisation of the heat thus afforded, that there is some prospect of this hitherto "waste material" being turned to really useful account. It will be obvious to everyone that the difficulties which must attend the satisfactory and economic disposal by combustion of such a heterogeneous mass as town refuse are by no means small, the chief problems which engineers have had to encounter being to ensure thorough combustion of the fuel, the complete utilisation of the resulting heat, so that none escapes in the ultimate gaseous products, and to prevent the occurrence of deposit in the flues and the objectionable dissipation of the same from the chimney. Step by step these difficulties have been more or less successfully dealt with; but, amongst the "destructors" at present in use, it cannot be said of one of them that the complete utilisation of the calorific value which resides in the common refuse and garbage of our towns is an accomplished fact. Claims have, however, been recently advanced in favour of a system in which the important economical advantages of the Livèt generator are realised. Armed, therefore, with an assurance that the difficulties which we have just pointed out had been completely overcome, we recently paid a visit in company

with several representatives of the engineering and allied professions to witness a demonstration of the "profit-earning qualities in town refuse," as exemplified in the Livèt plant which has been recently set up at Halifax, with the object of supplying electric energy for lighting and other purposes.

The successful working of the Livèt furnace appears to depend upon the peculiar construction of its flues, which are so built as to utilise the effect of the decreasing volume of the gases of combustion travelling towards the chimney, so promoting a high velocity to the air passing through the furnace-bars and producing rapid combustion with intense heat. At the same time, the effect of this peculiarity of construction is to cause the gases themselves to move slowly through the flues, so that they may part with their useful heat before escaping into the atmosphere. The force of draught at the furnace is such that a high and constant temperature is obtained and efficiency of combustion ensured, while all unpleasant odours inherent in town garbage are destroyed. As an example of the heat economy effected, it is said that whereas in previous generators the best results ever obtained have been three-quarters of a pound of water evaporated on the combustion of one pound of refuse, in the Livèt generator over three pounds of water are evaporated into steam for every pound of refuse consumed in spite of the fact that it is frequently known to contain 20 per cent. of moisture. The temperature of the gases just before entering the chimney is stated to be from 300° to 400° F. lower than hitherto obtained. The progression of the gases is partially arrested at both ends of each flue for the purpose of permitting them to deposit the contained light dust in suitable expansion chambers or pits which can be cleaned out when desirable. This arrangement serves to overcome the objectionable dust, which in ordinary "destructors" tends to choke the flues and impregnate the air of the surrounding districts. As regards the application of the Livèt system to the supply of electric energy the capacity of the installation at Halifax is equal, it is said, to 100 effective electrical units, or 10,000 incandescent lamps of 10-candle power, each burning six hours per diem, by the combustion of only 3000 tons or about one-third of the refuse of the town per annum, which, if the capacity had been equal to burning all the rubbish produced, would give one lamp three and a half hours to each inhabitant. The method adopted in the Livèt generator (known as the "cold storage" method), being what is called a "primary process," does not involve any element of loss arising from the production of surplus energy at a time when it is not required (as, for instance, in the case of electric lighting during a bright day), because, instead of producing energy in the form of steam, electricity, &c., and storing it up and utilising it as occasion demands, coal is resorted to and added to the town refuse when required to meet the enhanced demand of the dynamos.

It is impossible to speak of the merits of this process from a mere cursory inspection of the plant, but, as far as the eye could see, the working conditions of the apparatus at Halifax were very satisfactory, the combustion was apparently not accompanied with smoke, nor could particles or visible gases be seen issuing from the chimney shaft. As evening approached several arc lights were started, and on the visitors' return to the station two powerful search lights were vividly flashed in that direction (a considerable distance) under weather conditions which were exceedingly favourable for viewing light projections, since the night was very dark and wet.

CHOLERA.

ACCORDING to statements that have appeared it would seem that a fresh outbreak of cholera has occurred at Constantinople. We learn through Reuter's agency that some fifteen fresh cases and several deaths have been reported daily during the last three days. Cholera is also officially declared to have broken out at Tripoli. Several cases have occurred in the military hospital outside the town.

The latest accounts show that cholera has completely disappeared from St. Petersburg, no fresh cases having been reported in the official bulletin of the 10th inst. It will be remembered that a fresh outbreak of the disease had taken place in that city towards the end of last autumn.

PILGRIM QUARANTINE STATION AT CAMARAN.

THE International Sanitary Conference now sitting in Paris will, in all probability, discuss the condition of the Camaran island. This is the quarantine station at the mouth of the Red Sea for the pilgrims to Mecca, and the Conference is to discuss more especially the dangers that result from these pilgrimages. A great deal has been said as to the insanitary condition of Djeddah, where the pilgrims land, of Mecca, Medina and the other holy places. But now we have yet another danger, and that is the new quarantine station of Camaran. It was after the cholera epidemic of 1865 that the International Sanitary Conference, which met in Constantinople in 1866, suggested that a quarantine station should be established at the mouth of the Red Sea. Two Ottoman commissions were appointed to inspect the Red Sea coasts and suggest a likely locality. They ultimately chose the island of Camaran, which is situated near the town of Laheya, some 150 miles N.N.W. of the Straits of Bab-el-Mandeb and 300 miles from Djeddah. The island was first used as a quarantine station in 1881; but, even up to this day, no suitable provision has been made for the many thousand pilgrims who are detained here. Dr. L. Arnaud gives an interesting description of the island in the *Revue d'Hygiène*, and it is to be hoped that the International Sanitary Conference will investigate the facts brought forward. There are, it appears, only five villages on the island, with a native population of 1500 persons. The local resources are therefore of the poorest description. The temperature varies from 32° to 40° C. The lazaret consists of shanties built with palm-tree branches, rushes, and matting. They measure 20 metres in length, 5·50 metres in width, and 3·60 metres in height, and are intended to give shelter to forty pilgrims. But as the number of these shanties is insufficient, they have had at times to hold as many as seventy-three occupants instead of forty. Last year there were altogether 23,866 pilgrims retained at Camaran, who were able to pay for their board, 6264 pilgrims who had to live on charity, and 1550 children. It may be said that on an average 17,000 persons are detained here in the course of twelve months. Each pilgrim, unless he is classified as a pauper, must pay a tax for the guard that watches over him, and the Ottoman sanitary authorities derive considerable benefit from this tax. The total receipts for the quarantine service at Camaran from March 1st, 1881, to March 1st, 1891, amounted to 6,307,222·24 piastres. The expenses were set down at 4,780,803·58 piastres; this is equal to an average annual profit of 152,641 piastres.

In spite of this good revenue the island is in a most insanitary condition. There are no sewers, but cesspits or movable pails, which give off the foulest odours; yet it would be easy to construct sewers and to drain directly into the sea. There is no proper accommodation for cooking. The pilgrims cook in the open air at a great risk of setting their wooden shanties on fire. Nor is there any masonry building where goods, luggage, &c., can be safely sheltered in case of bad weather. Also the anchorage of Camaran is difficult to reach, and several wrecks have occurred because the buoys are badly placed and not sufficiently numerous. Finally, there is no isolation hospital for infectious cases, and the water-supply is deficient both in quality and in quantity. Under such conditions it is quite natural that the quarantine island should itself become a centre of disease. Indeed, there is the fact that before the installation of this quarantine station, there were not so many epidemics of cholera at the Hedjaz or pilgrim season. There were epidemics among the pilgrims in 1865, 1866, 1872, and 1877. After the opening of the lazaret at Camaran there were epidemics of cholera in 1881, 1882, 1883, 1890, 1891, and 1893. Thus as at present mismanaged, it seems evident that this quarantine station has done more harm than good.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6532 births and 3830 deaths were registered during the week ending Feb. 10th. The annual rate of mortality in these towns, which had declined from 28·5 to 20·0 per 1000 in the

preceding four weeks, further fell last week to 19·1. In London the rate was 18·4 per 1000, while it averaged 19·6 in the thirty-two provincial towns. The lowest rates in these towns were 12·1 in Croydon, 13·5 in Leicester, 14·6 in Burnley, 15·8 in Derby, and 16·3 in Bradford; the highest rates were 21·8 in Hull, 22·6 in Birmingham, 23·7 in Birkenhead, 24·2 in Liverpool, and 26·5 in Bristol. The 3830 deaths included 431, which were referred to the principal zymotic diseases, against numbers declining from 548 to 451 in the preceding four weeks; of these, 138 resulted from whooping-cough, 88 from diphtheria, 76 from measles, 46 from scarlet fever, 43 from "fever" (principally enteric), 33 from diarrhœa, and 7 from small-pox. No fatal case of any of these diseases occurred last week in Brighton, Norwich, or Blackburn; in the other towns they caused the lowest death-rates in Huddersfield, Halifax, and Gateshead, and the highest rates in West Ham, Burnley, Liverpool, Bristol, and Wolverhampton. The greatest mortality from measles occurred in Wolverhampton; from scarlet fever in Sunderland; and from whooping-cough in Plymouth, Bristol, Cardiff, Manchester, and Sheffield. The mortality from "fever" showed no marked excess in any of the large towns. The 88 deaths from diphtheria included 56 in London, 10 in West Ham, 3 in Manchester, and 3 in Bradford. Four fatal cases of small-pox were registered in Birmingham, and 1 each in West Ham, Halifax, and Bradford, but not one in London or in any other of the thirty-three large towns. There were 77 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 10th inst., against 82, 78, and 82 at the end of the preceding three weeks; 15 new cases were admitted during the week, against 17 and 18 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 2645, 2533, and 2491 at the end of the preceding three weeks, had further declined to 2387 on Saturday last; 224 new cases were admitted during the week, against 235 and 245 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 762 to 385 in the preceding four weeks, further fell to 372 last week and were 96 below the corrected average. The causes of 77, or 2·0 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Cardiff, Oldham, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Blackburn, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·0 per 1000 in each of the preceding two weeks, declined to 19·7 during the week ending Feb. 10th, but was 0·6 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 9·6 in Paisley and 16·3 in Edinburgh to 25·3 in Leith and 27·4 in Perth. The 561 deaths in these towns included 28 which were referred to whooping-cough, 17 to diphtheria, 11 to scarlet fever, 7 to "fever," 7 to diarrhœa, 4 to small-pox, and not one to measles; in all, 74 deaths resulted from these principal zymotic diseases, against 79 and 81 in the preceding two weeks. These 74 deaths were equal to an annual rate of 2·6 per 1000, which exceeded by 0·5 the mean rate last week for the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 51 and 43 in the preceding two weeks, further declined to 28 last week, of which 12 occurred in Glasgow, 6 in Aberdeen, 4 in Edinburgh, and 4 in Dundee. The deaths referred to diphtheria, which had been 6 and 8 in the preceding two weeks, further rose to 17 last week, and included 14 in Glasgow. The 11 fatal cases of scarlet fever corresponded with the number in the preceding week; 6 occurred in Glasgow and 5 in Edinburgh. The deaths referred to different forms of "fever," which had been 3 and 5 in the preceding two weeks, further rose to 7 last week, and included 4 in Glasgow and 2 in Paisley. The 4 fatal cases of small-pox were recorded in Leith. The deaths referred to diseases of the respiratory organs in these towns, which had been 133 and 128 in the preceding two weeks, further declined to 121 last week, and were 61 below the number in the corresponding week of last year. The causes of 38, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 30·9 to 33·6 per 1000 in the preceding three weeks, declined to 33·1 during the week ending Saturday, Feb. 10th. During the past six weeks of the current quarter the death-rate in the city has averaged 33·3 per 1000, against 22·6 in London and 18·9 in Edinburgh. The 222 deaths registered in Dublin during the week under notice showed a slight decline from the number in the previous week, and included 21 which were referred to the principal zymotic diseases, against 23 and 20 in the preceding two weeks; of these, 8 resulted from whooping-cough, 4 from "fever," 3 from scarlet fever, 3 from diarrhœa, 2 from diphtheria, 1 from measles, and not 1 from small-pox. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 2·4 in London and 1·9 in Edinburgh. The fatal cases of whooping-cough, which had declined from 12 to 10 in the preceding three weeks, further fell to 8 last week. The deaths referred to different forms of "fever," which had declined from 5 to 2 in the preceding three weeks, rose again to 4 last week. The fatal cases of scarlet fever, which had been 2 in each of the preceding two weeks, were 3 last week. The 222 deaths registered in Dublin last week included 42 of infants under one year of age and 48 of persons aged upwards of sixty years; the deaths of infants exceeded those recorded in recent weeks, while those of elderly persons showed a decline. Nine inquest cases and 5 deaths from violence were registered; and 67, or nearly a third, of the deaths occurred in public institutions. The causes of 22, or nearly 10 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING JANUARY, 1894.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality during January in each of the forty-three sanitary districts of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 10·3 per 1000 of the population, estimated at 4,349,166 persons in the middle of this year. In the preceding three months the rates had been 24·5, 20·5, and 14·0 per 1000. Among the various sanitary districts the rates last month were considerably below the average in Chelsea, St. James Westminster, Hampstead, Stoke Newington, St. Martin-in-the-Fields, Strand, City of London, and St. George Southwark; while they showed the largest excess in Hackney, Holborn, Bethnal Green, St. George-in-the-East, Mile End Old Town, Poplar, Rotherhithe, Battersea, and Plumstead. The prevalence of small-pox in London showed a further marked decline during January, an average of 12 cases weekly being notified, against 32 and 20 in the preceding two months; of the 61 cases notified during last month, 12 belonged to Poplar, 9 to Greenwich, 7 to Kensington, and 5 to Mile End Old Town sanitary districts. The Metropolitan Asylum Hospitals contained 70 small-pox patients at the end of January, against 128 and 82 at the end of the preceding two months; the weekly admissions averaged 13, against 20 in each of the preceding two months. The prevalence of scarlet fever in London showed a further marked decline from that recorded in recent months; this disease was proportionally most prevalent in Hackney, Clerkenwell, Mile End Old Town, Newington, Rotherhithe, Woolwich, and Plumstead sanitary districts. The Metropolitan Asylum Hospitals contained 2404 scarlet fever patients at the end of January, against 2633, 2755, and 2871 at the end of the preceding three months; the weekly admissions averaged 244, against 335 and 275 in the preceding two months. Diphtheria also showed decreasing prevalence during the month under notice; among the various sanitary districts this disease showed the highest proportional prevalence in St. Pancras, Islington, Hackney, Holborn, Clerkenwell, Shoreditch, Bethnal Green, St. George-in-the-East, Rotherhithe, and Battersea. There were 320 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of January, against 308 and 283 at the end of the preceding two months; the weekly admissions averaged 64, against 64, 70, and 55 in the preceding three months. The prevalence of enteric fever showed a very marked decline during last month; among the various sanitary districts this disease was proportionally most prevalent in St. Martin-in-the-Fields, Holborn, Bethnal Green, St. George-in-the-East, and Poplar. Erysipelas showed the highest proportional

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON.—JANUARY, 1894.

(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1894.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,349,166	61	2038	1102	—	144	8	39	815	—	4307	10·3	3	226	116	290	436	—	62	4	64	1201	2·9	9603	23·0	152
West Districts.																										
Paddington	121,583	3	31	36	—	6	—	1	23	—	100	8·6	1	2	2	9	5	—	2	—	1	22	1·9	217	18·6	126
Kensington	167,350	7	65	26	—	8	1	3	35	—	145	9·0	—	12	5	6	18	—	5	3	5	54	3·4	358	22·3	198
Hammersmith	105,696	2	46	15	—	4	1	—	13	—	81	8·0	—	—	1	8	17	—	—	—	2	28	2·8	211	20·8	178
Fulham	140,593	2	18	26	—	1	—	1	12	—	60	9·4	—	—	5	14	7	—	1	—	2	29	2·7	191	17·9	130
Chelsea	99,052	2	31	15	—	3	—	—	12	—	63	6·6	—	2	—	1	2	—	2	—	—	7	0·7	211	22·2	151
St. George Hanover-square	75,033	—	31	8	—	6	—	—	10	—	55	7·6	—	1	—	2	1	—	3	—	—	7	1·0	131	18·2	88
Westminster	54,444	—	24	7	—	3	—	—	5	—	39	7·5	—	7	1	1	4	—	1	—	1	15	2·9	145	27·8	174
St. James Westminster	23,571	—	6	2	—	1	—	—	1	—	10	4·4	—	1	1	2	—	—	—	—	—	4	1·8	49	21·7	111
North Districts.																										
Marylebone	138,554	—	70	27	—	11	—	1	38	—	136	10·2	—	25	5	7	4	—	2	—	1	44	3·3	331	27·2	162
Hampstead	75,443	—	25	13	—	3	—	—	7	—	48	6·6	—	1	—	3	3	—	—	—	2	9	1·2	104	14·4	155
St. Pancras	239,739	2	107	68	—	13	—	1	58	—	249	11·1	—	11	4	13	18	—	5	—	2	53	2·4	541	24·1	161
Islington	231,900	—	110	122	—	23	—	8	70	—	373	11·7	—	23	6	34	35	—	4	—	3	105	3·3	730	22·9	143
Stoke Newington	34,172	—	8	7	—	1	—	—	3	—	19	5·8	—	1	2	1	1	—	—	—	—	5	1·5	54	16·5	138
Hackney	211,493	2	146	75	—	16	1	1	37	—	278	13·7	—	23	5	16	17	—	2	—	1	64	3·2	295	19·4	149
Central Districts.																										
St. Giles	38,144	—	12	2	—	3	—	—	11	—	28	7·7	—	2	1	2	8	—	—	—	—	13	3·6	127	34·7	185
St. Martin-in-the-Fields	13,783	—	—	2	—	3	—	—	1	—	6	4·5	—	—	—	1	1	—	—	—	—	2	1·5	34	24·2	167
Strand	23,179	—	6	3	—	—	—	—	2	—	11	4·9	—	—	1	1	7	—	1	—	—	10	4·5	83	37·3	167
Holborn	32,438	—	17	17	—	4	—	—	12	—	50	16·1	—	7	—	4	5	—	1	—	—	17	5·5	115	37·0	309
Clerkenwell	65,312	1	38	20	—	4	—	1	12	—	76	12·1	—	1	—	3	9	—	1	—	3	17	2·7	165	26·3	130
St. Luke	41,168	2	14	5	—	1	—	—	12	—	34	8·6	—	5	4	4	1	—	—	—	—	14	3·5	119	32·7	108
City of London	37,882	—	12	1	—	—	—	—	6	—	19	5·7	—	—	2	—	4	—	—	—	—	6	1·8	94	28·1	218
East Districts.																										
Shoreditch	123,186	—	52	38	—	7	—	1	18	—	116	9·8	—	9	4	7	31	—	—	—	—	51	4·3	3 9	27·9	154
Bethnal Green	129,840	1	63	42	—	20	—	—	38	—	164	13·2	—	10	7	13	15	—	1	—	1	47	3·8	331	26·6	145
Whitechapel	75,498	—	39	15	—	4	—	3	13	—	74	10·2	—	3	6	5	7	—	5	—	4	30	4·1	203	28·0	172
St. George-in-the-East	45,360	—	22	21	—	11	1	1	13	—	71	16·3	—	4	3	8	13	—	4	—	5	37	8·5	157	36·1	199
Limehouse	57,000	2	22	13	—	1	—	—	15	—	53	9·7	—	7	1	3	8	—	1	—	1	21	3·8	150	27·4	147
Mile End Old Town	108,242	5	76	32	—	6	—	—	23	—	142	13·7	1	2	4	8	7	—	1	—	2	25	2·4	250	24·1	118
Poplar	170,217	12	81	48	—	17	1	1	58	—	218	13·4	1	12	3	14	15	—	3	—	2	50	3·1	373	22·9	164
South Districts.																										
St. Saviour Southwark	26,712	1	14	5	—	—	—	—	6	—	26	10·2	—	5	—	—	2	—	—	—	—	7	2·7	59	23·0	115
St. George Southwark	60,660	—	24	8	—	1	—	—	5	—	38	6·6	—	4	2	3	11	—	—	—	—	20	3·5	181	31·4	195
Newington	118,512	—	72	30	—	4	—	1	21	—	128	11·3	—	7	4	9	34	—	1	—	1	56	4·9	383	29·3	191
St. Olave Southwark	12,984	—	6	4	—	—	—	—	2	—	12	9·6	—	2	2	1	4	—	—	—	—	9	7·2	44	35·3	200
Bermondsey	84,053	1	42	32	—	2	—	—	14	—	81	10·1	—	1	2	6	15	—	1	—	2	27	3·4	216	26·8	154
Rotherhithe	40,265	—	40	18	—	—	—	—	7	—	65	16·8	—	1	1	1	—	—	—	—	2	5	1·3	88	22·7	197
Lambeth	282,574	—	113	57	—	20	2	3	28	—	233	8·6	—	14	4	14	17	—	7	—	6	60	2·2	633	23·4	124
Battersea	161,558	3	82	76	—	11	—	4	36	—	212	13·7	—	10	5	14	7	—	3	—	4	43	2·8	295	19·0	126
Wandsworth	179,518	1	75	26	—	6	—	1	31	—	140	8·1	—	—	2	12	7	—	1	—	6	28	1·6	277	16·1	144
Camberwell	248,863	—	119	59	—	4	—	3	33	—	218	9·1	—	8	6	11	17	—	—	—	5	47	2·0	478	20·0	157
Greenwich	173,128	9	93	48	—	7	—	1	26	—	184	11·1	—	2	9	15	31	—	—	1	—	58	3·5	376	22·6	141
Lewisham (excluding Penge)	79,903	—	34	12	—	2	—	2	14	—	64	8·4	—	—	—	2	8	—	2	—	—	12	1·6	133	17·4	210
Woolwich	42,309	2	24	3	—	1	1	1	5	—	37	9·1	—	1	3	—	8	—	2	—	—	14	3·5	100	24·6	155
Lee	38,172	—	12	11	—	—	—	—	4	—	27	7·4	—	2	1	7	3	—	—	—	—	13	3·6	63	17·2	105
Plumstead	54,283	1	44	15	—	5	—	—	15	—	80	14·1	—	—	2	5	9	—	—	—	—	16	2·8	98	16·4	92
Port of London	—	—	3	—	—	1	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 52 cases of membranous croup.

† Including deaths from membranous croup.

Note.—On April 1st next the parish of Stoke Newington will be constituted a separate sanitary district, and be no longer included in the Hackney sanitary district; and on the same date the parish of Plumstead will form a separate sanitary district, the parishes of Lee, Charlton, and Eltham constituting the Lee sanitary district. In order to secure uniformity in the above table throughout the year, the figures for these four sanitary districts are shown as though the changes dated from the commencement of the current year

prevalence in Holborn, St. Luke, Bethnal Green, St. George-in-the-East, and Poplar sanitary districts. Eight cases of puerperal fever were notified in Islington and 4 in Battersea sanitary districts.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary districts, the deaths occurring in the institutions of London having been distributed among the various sanitary districts in which the patients had previously resided. The distribution of these deaths, especially of those resulting from zymotic diseases, affords the most trustworthy data upon which to calculate reliable rates of mortality. During the five weeks ending Saturday, Feb. 3rd, the deaths of 9603 persons belonging to London were registered, equal to an annual rate of 23·0 per 1000, against 18·6, 23·6, and 27·0 in the preceding three months. The lowest death-rates during January in the various sanitary districts were 14·4 in Hampstead, 16·1 in Wandsworth, 16·4 in Plumstead, 16·5 in Stoke Newington, 17·2 in Lee, 17·4 in Lewisham, and 17·9 in Fulham; the highest rates were 31·4 in St. George Southwark, 32·7 in St. Luke, 34·7 in St. Giles, 35·3 in St. Olave Southwark, 36·1 in St. George-in-the-East, 37·0 in Holborn, and 37·3 in Strand. During the five weeks of January 1201 deaths were referred to the principal zymotic diseases in London; of these, 436 resulted from whooping-cough, 290 from diphtheria, 226 from measles, 116 from scarlet fever, 66 from different forms of "fever" (including 62 from enteric fever and 4 from ill-defined forms of fever), 64 from diarrhœa, and 3 from small-pox. These 1201 deaths were equal to an annual rate of 2·9 per 1000, against 2·7, 3·0, and 3·1 in the preceding three months. Among the various sanitary districts the lowest zymotic death-rates were recorded in Chelsea, St. George Hanover-square, Hampstead, Stoke Newington, St. Martin-in-the-Fields, and Rotherhithe; and the highest rates in Strand, Holborn, Shoreditch, St. George-in-the-East, Newington, and St. Olave Southwark. Three fatal cases of small-pox were registered in London during the month under notice, being 19 below the corrected average number in the corresponding periods of the preceding ten years; of these 3 deaths, 1 each belonged to Paddington, Mile End Old Town, and Poplar sanitary districts. The 226 deaths referred to measles were within 28 of the corrected average number; among the various sanitary districts this disease showed the highest proportional fatality in Marylebone, Hackney, Holborn, St. Luke, Limehouse, and St. Saviour Southwark. The 116 fatal cases of scarlet fever slightly exceeded the corrected average number; this disease was proportionally most fatal in St. Luke, Whitechapel, and St. Olave Southwark sanitary districts. The 290 deaths referred to diphtheria were more than double the corrected average; among the various sanitary districts this disease showed the highest proportional fatality in Fulham, Islington, Holborn, St. Luke, Bethnal Green, St. George-in-the-East, Greenwich, and Lee sanitary districts. The 436 fatal cases of whooping-cough slightly exceeded the corrected average; this disease was proportionally most fatal in Hammersmith, St. Giles, Strand, Shoreditch, St. George-in-the-East, St. George Southwark, Newington, Bermondsey, and Greenwich sanitary districts. The 66 deaths referred to different forms of "fever" corresponded with the corrected average; among the various sanitary districts the highest "fever" death-rates were recorded in Whitechapel and St. George-in-the-East. The 64 fatal cases of diarrhœa were slightly below the corrected average. In conclusion, it may be stated that the mortality in London during January from these principal zymotic diseases exceeded the average by 14 per cent.

Infant mortality in London during the month under notice, measured by the proportion of deaths under one year of age to registered births, was equal to 152 per 1000; the lowest rates were recorded in St. George Hanover-square, St. James Westminster, St. Luke, St. Saviour Southwark, Lee, and Plumstead; and the highest rates in Kensington, Holborn, City of London, St. Olave Southwark, Rotherhithe, and Lewisham.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

THE following officers are in orders to return from India during the present trooping season, in addition to those already notified: Surgeon-Major Porter, Surgeon-Captains Donovan and Russell. Surgeon-Major Reynolds has arrived from India. The following officers have embarked in the *Arvoca:* Surgeon-Captain Wiles for India, Surgeon-Captains Duncan and Moffet for Cyprus, and Surgeon-Captain Adamson for Egypt. Surgeon-Major-General Paterson has arrived from Malta and been appointed Principal Medical Officer at Aldershot, in succession to Surgeon-Major-General Wade, retired. Surgeon-Captain Black has been posted to the Curragh.

ARMY MEDICAL STAFF.

The following promotions are announced: Surgeon-Colonels to be Surgeon-Major-Generals: J. Davis, vice T. N. Hoysted, retired, and C. H. Giraud, vice F. W. Wade, retired. Brigade-Surgeon-Lieutenant-Colonels to be Surgeon-Colonels: John W. Maxham, M.D., vice J. Davis, and M. Cogan, vice C. H. Giraud. Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels: John Barry, M.D., vice J. W. Maxham, M.D., and J. Riddick, vice M. Cogan.

INDIA AND THE INDIAN MEDICAL SERVICES.

Brigade-Surgeon-Lieutenant-Colonel J. C. G. Carmichael, I.M.S., is temporarily promoted to the rank of Surgeon-Colonel, to fill a vacancy in the administrative grade consequent on the retirement of Surgeon-Colonel G. C. Chesnaye, Principal Medical Officer, Lahore District. Surgeon-Captain M. A. Ker, I.M.S. (Bengal), is appointed to officiate as Civil Surgeon of Simla during the absence on privilege leave of Surgeon-Major J. A. Cunningham, M.D., M.Ch. Surgeon-Captain C. F. Fearnside is temporarily appointed to act as Civil Surgeon, Cannanore. The following postings are directed: Brigade-Surgeon-Lieutenant-Colonel W. F. Burnett, on arrival from England, to the Medical Charge of the South Station Hospital, Secunderabad. Surgeon-Lieutenant-Colonel R. H. Robinson, in medical charge of the South Station Hospital, Secunderabad, to the Medical Charge of the Central Station Hospital, Secunderabad. Surgeon-Major R. H. Forman, doing duty Belgaum and Bangalore Districts, to do duty Secunderabad District. Surgeon-Major W. C. T. Poole, on arrival from England, to Secunderabad District. Surgeon-Captain E. D. Farmar-Bringhurst, doing duty, Secunderabad District, to do duty Belgaum and Bangalore Districts. Surgeon-Major T. H. Sweeny, Civil Surgeon, on return from furlough, to the Benares District. The services of Surgeon-Captain C. N. Bensley, I.M.S. (Bengal), are replaced temporarily at the disposal of the Government of Bengal. The services of Surgeon-Colonel G. Thomson, M.B., are replaced permanently at the disposal of the Military Department. The services of Brigade-Surgeon-Lieutenant-Colonel A. Cameron, Civil Surgeon, Benares, are placed at the disposal of the Government of India, Home Department. The services of Surgeon-Captain J. L. T. Jones are replaced at the disposal of the Government in the Military Department. Surgeon-Captain J. Crimmin, V.C., and Surgeon-Major F. F. MacCartie, M.B., have respectively delivered over and received Charge of the office of the Health Officer of the Port of Bombay. Surgeon-Major D. C. Davidson and Surgeon-Major H. McCalman have respectively delivered over and received Charge of the Dharwar Gaol. Surgeon-Lieutenant-Colonel F. C. Barker and Surgeon-Lieutenant W. Carr Sprague have respectively delivered over and received Charge of the Rajkote Gaol. Surgeon-Lieutenant-Colonel Quill, A.M.S., obtains leave to England for seven months.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon Henry Dawson Stanistreet is promoted to the rank of Deputy-Inspector-General of Hospitals and Fleets. Fleet-Surgeon Henry John Madders, M.D., is placed on the Retired List, at his own request. The following appointments are notified: Staff-Surgeons: R. W. Anderson, to the *Wallaroo*, and William S. Lightfoot, to the *Lion;* Surgeons: Francis J. Lea, to the *Ringarooma;* A. E. Weightman, to the *Katoomba;* Frederick J. Burns, M.D., to the *Dolphin;* George Hewlett, M.B., to Haslar Hospital; and James C. F. Whicher, to Sheerness Barracks.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Henry F. Stokes to be Surgeon-Major.

VOLUNTEER CORPS.

Artillery: 1st Banff: Alexander Barclay Lyon, M.B., to be Surgeon-Lieutenant.—1st Dorsetshire (Southern Division, Royal Artillery): Surgeon-Lieutenant A. E. Drury resigns his commission.—The Tynemouth (Western Division, Royal Artillery): Surgeon-Lieutenant H. R. Bramwell, M.B., to be Surgeon-Captain. — *Engineer:* 2nd Lancashire (The St. Helens): Robert Jackson, M.B., to be Surgeon-

Lieutenant.—*Rifle:* 2nd Volunteer Battalion, the Norfolk Regiment: John Benjamin Nicholson Vickers, Gent., to be Surgeon-Lieutenant.

THE VOLUNTEER OFFICERS' DECORATION.

This decoration has been conferred upon the undermentioned officers of the Volunteer Forces: *North-Eastern District: Rifle:* 1st Volunteer Battalion, the Sherwood Foresters (Derbyshire Regiment): Surgeon-Major Thomas L. Gentles. 2nd Volunteer Battalion, the York and Lancaster Regiment: Surgeon-Lieutenant Hubert H. B. Wilkinson.—*North-Western District: Artillery:* 9th Lancashire: Surgeon-Lieutenant-Colonel Robert Patrick, M.D.—*Rifle:* 4th Volunteer Battalion, the King's (Liverpool Regiment): Brigade-Surgeon-Lieutenant-Colonel Thomas Munns Wills.—*Home District: Engineers:* 2nd Volunteer Battalion, the East Surrey Regiment: Brigade-Surgeon-Lieutenant-Colonel E. Pocklington.—*Scottish District: Artillery:* 9th Lanarkshire: Surgeon-Captain Robert James Stewart.

SANITARY PROGRESS IN INDIA.

Among the changes that have taken place in India during the last five years the *Times of India* recently alluded to the sanitary schemes and improvements that have of late been introduced or effected. Towards the close of Lord Dufferin's rule as Viceroy of India a scheme for instituting provincial sanitary boards was put forward as an important feature in the organisation of a superior sanitary administration. The Government of India was subsequently in a position in 1893 to inform the Secretary of State that a sanitary board had been formed in every province. The drainage of large towns and the protection of rivers from crude sewage was the subject of a report by experts in 1892, and the principles therein laid down have been adopted as the sanitary policy of India. It is now, we hope, regarded as a fundamental principle that sewage is to be purified by filtration and otherwise before it is discharged into rivers, and that sewage farms are to be established in connexion with inland towns. Village post-offices and police outposts have been utilised for the distribution of packets of quinine amongst the poor, and opportunities have been taken for encouraging vaccination. Legislation for dealing with lepers, which was under the consideration of the Government during the earlier part of Lord Lansdowne's viceroyalty, has not been carried out, mainly owing to the conclusions of the Leprosy Commission not having afforded a favourable basis for the enactment of any practical scheme of legislation.

Correspondence.

"Audi alteram partem."

"THE CORONER'S COURT."

To the Editors of THE LANCET.

SIRS,—It may be of some consolation to your correspondent Dr. Henry Love, who writes under the above heading, to know that he is not the only sufferer at the hands of a coroner or the police and their superiors. It is just possible that the coroner may not be so much to blame in the matter as are those who get up the case and who leave out the medical practitioner, who, it may be at great inconvenience and sacrifice, responds to the cry for help of those in trouble, though it may be difficult to see how the coroner, supposing the whole case to be laid before him, can overlook the medical man in attendance during the last illness, especially as his name must of necessity, for the case to be complete, be found in the report, unless the ways of police reports, like "the heathen Chinee," are peculiar. I have upon several occasions during the past three years been summoned by the police during the hours "when ghosts walk and churchyards yawn" to attend persons who have met with an accident which had terminated fatally, yet beyond the satisfaction which a good deed gives to the person who does it my reward has been *nil*. On the 3rd inst. I was called upon to visit a person who had been kicked by another. After examining the patient and giving an unfavourable prognosis I was waited upon by the constable in charge of the case, to whom I communicated my opinion. He reported to his "chief," who summoned, in the absence of the police surgeon, his deputy, who saw my patient *in extremis* and learned from the person who had charge of the house and patient that I had been in attendance. The patient died the same night. An inquest was opened on the following day, when a post-mortem examination was ordered, the inquest being further adjourned, of neither of which facts I received any notice. Now, in all this I do not blame the coroner, than whom I know of none who bears a better name for justice and fair-dealing. I thought, however, that the police surgeon or his deputy, who must have mentioned my name somehow to his chief—and, if not, there was bad management—might have had (in these days when medico-chirurgical societies are as plentiful as mushroom beds, but which lack one thing yet—viz., practical classes attached to them) sufficient courtesy to name the time and place of the post-mortem examination to the last attendant upon the deceased. Your correspondent calls his case a grievance; I used to think so, but not now. There are many things in this life which—though they are wrong and which injure us—we become used to and take as a matter of course. I think that when a police surgeon has a deputy either the one or the other ought to be within call of the police; they are paid for the work, let them do it; else let the general practitioner when summoned by the police refuse to attend unless his fee is assured. If there are fame and money, let them both go to the person who does the work, and let them not be divided between the hardworked general practitioner, whose income is precarious, and the police surgeon, whose salary is assured.

I am, Sirs, yours truly,

Blackburn, Feb. 10th, 1894. JAMES T. T. RAMSAY.

To the Editors of THE LANCET.

SIRS,—The letter from Dr. Henry Love which you publish in this week's number of THE LANCET recalls to my mind a similar experience which I had last summer. I had then been but two or three months in the district and was ignorant of the peculiarities of the coroner's court. I happened to be called one Sunday morning at 6 A.M. to see a man who had cut his throat. On arriving at the house I found him lying in a pool of blood with a pocket-knife beside him. The body was still warm, but life was extinct. The man had completely severed his larynx and injured his œsophagus, but the carotid arteries were not cut. Thinking I would be called upon to give evidence at the coroner's court, I carefully examined the body and its surroundings. I came to the conclusion that death was due to venous hæmorrhage and that the wound was self-inflicted. As I was leaving the house a police-constable entered. As I could not get a fee from the man who came for me, whose excuse was that the deceased was only his lodger and a stranger, I asked the policeman for a medical aid certificate. He refused on the ground that he had not sent for me. I hoped, however, to have at least the coroner's inquest fee. I did not hear anything of the case after leaving the house until two days later, when I met the coroner's officer. On making inquiries I ascertained that an inquest would be held on the next day, but that I would not be called as a witness, as the coroner dispensed with medical evidence in cases where the cause of death was apparent, as in cases of drowning, cut throats, &c. This statement I have found to be correct. I have also been informed that the medical men of the district who are well acquainted with this peculiarity of our coroner's court find it convenient "not to be in" in such cases. This explained to me the mysterious fact in the above-related case, that I was the fifth practitioner at whose house the messenger had called, as all the others were busy attending to their cases at that early hour (6 A.M.) on Sunday morning.—I am, Sirs, yours faithfully,

EDMUND HAY, M.B.

Victoria Dock-road, West Ham, E., Feb. 13th, 1894.

"SOME POINTS IN THE ETIOLOGY OF CANCER."

To the Editors of THE LANCET.

SIRS,—The interesting but brief article under the above heading that appeared in THE LANCET of Jan. 27th by Professor Rubert Boyce induces me to point out that the theory which I published in 1888[1] has never been contradicted

[1] What is the Cause of Cancerous Infectivity? THE LANCET, Aug. 18th, 1888.

and is not so by any of the points named by Professor Boyce. I regarded the subject in this light. Proliferation may occur in a great variety of tissues; for example, in inorganic muscular tissue, in fatty tissue, and in epithelial tissue. Such proliferation is, however, only malignant when in epithelial tissue. My theory only professes to account for this; it does not say why the proliferation occurs at all. This latter question is, I know, the most important, but it is a distinct one. However this question may in the end be settled, it would still remain to be explained why epithelial proliferation is cancer, and why proliferation of inorganic muscular tissue is not. I believe all proliferation to arise from similar causes, and it must be taken from this broader basis; but I take it that the reason some tissues when proliferating form malignant tumours is the natural qualities of the cell itself—i.e., before it has become diseased. When inorganic muscle cells proliferate their length alone will prevent malignancy, for it causes them to felt together and to cling into a mass which, as it grows, pushes the cellular tissue in front of it to form a capsule. By this capsule they are bounded, and to some extent by pressure and by limitation in blood-supply their growth is limited. Individual cells cannot separate and invade the surrounding parts. When, however, epithelium, say, originating in a gland duct below the general surface, begins to proliferate the natural properties of the cells allow of their separation—they are small and rounded and hard, with little natural cohesion. These little bullets are pushed through the meshes of the surrounding tissues instead of pushing them before themselves; in this lies the secret of malignancy. Fresh centres form and the same process of invasion, unchecked by encapsulation, causes endless destruction, only terminating with life itself. The same is true of sarcoma with its small rounded cells—the more rounded the more malignant, the more spindle-shaped the less so. The solution of the greater question—why proliferation occurs at all—is more difficult to answer; but this is not part of my theory. If, however, my theory is accepted it will render the solution of this greater question more easy, for it will be looked at from a broader and, I think, truer standpoint.

I am, Sirs, yours truly,

JAMES BRAITHWAITE, M.D. Lond.

Clarendon-road, Leeds, Feb. 12th, 1894.

"THE MORTALITY FROM CANCER."

To the Editors of THE LANCET.

SIRS,—Dr. Lyon, in criticising the paper on cancer mortality by Mr. King and Dr. Newsholme, appears to me to miss the point of some of the arguments and to undervalue some of the evidence. The Frankfort figures are admittedly carefully prepared and are quite sufficient to yield strong presumptive evidence in favour of Mr. King and Dr. Newsholme's theory. The number of female deaths available for the purpose ranges from 236 to 524 per septennium, those of males from 107 to 276, and if these are dealt with in groups, as in the paper, they are amply sufficient to prove the absence in Frankfort of any decided increase in "accessible cancer," together with a steady increase in the record for "inaccessible cancer." The smaller population dealt with is not an unmixed disadvantage, as it is easier to ascertain the real causes of death in a small population.

That the British and Irish curves do not yet approach a horizontal line is to be expected, seeing that the recorded cancer death-rate here is still only about two-thirds that at Frankfort. Probably the number of deaths recorded from ill-defined synonyms for cancer is correspondingly greater here. Dr. Lyon ignores the confirmatory evidence yielded by the Scottish Widows' Fund curve, which starts at a higher and ends at a lower level than the British and Irish ones, corresponding with better diagnosis and the rejection of the markedly predisposed. Then, again, Dr. Lyon fails to grasp the argument from parallelism of the English male and female curves and the convergence, for the most part, in the Scotch and Irish, for if the increase were real the difference between the pairs of curves should be a proportion of the whole and give rise to divergence. That no such divergence is found goes to prove the relatively greater increase in the male record, which consists mainly of "inaccessible cancer," as shown in the Frankfort figures. With Dr. Lyon's concluding remark I am to some extent in agreement, although for a different reason. The cumulative evidence in favour of the writer's theory appears to me so considerable that we should refuse to give credence to any alarmist statements as to the enormous increase in cancer mortality, and I should not wonder if, on further consideration, Dr. Lyon were to come to a similar conclusion.—I am, Sirs, yours faithfully,

Feb. 12th, 1894. F. R. WALTERS.

CHRONIC IRRITATION AND CANCER.

To the Editors of THE LANCET.

SIRS,—A great deal has been written about "chronic irritation" and "cancer," but, on critical examination of the subject, what a terrible dearth of facts. According to Broussais,[1] the apostle of this doctrine, there is no such disease as cancer, the morbid condition thus erroneously designated being nothing more than a form of chronic irritation *in excelsis*. In support of this doctrine the only evidence hitherto adduced of any scientific value is Volkmann's.[2] He collected from many and various sources records of 223 cases of primary cancer of the extremities, and on analysing these he found that in no less than 88 per cent. the cancerous disease originated in connexion with some pre-existing lesion of the part; in only 12 per cent. did it appear to have arisen spontaneously. If the state of things revealed by this analysis could be proved to be really representative of the ordinary mode of development of cancer these data would be valuable evidence in favour of the influence of irritation; but I maintain that it is not so. The cases analysed by Volkmann were not consecutive cases, but most of them had been recorded at various times by different observers with the special object of showing the association between cancer and pre-existing disease, as to the occurrence of which there is no doubt. The fallacy of accepting these data as typical of what takes place in the ordinary development of cutaneous cancer is well seen by comparing Volkmann's results with the following analysis of forty consecutive cases of primary cutaneous cancer recorded by myself,[3] in which special attention was directed to the question of pre-existing disease of the part; of these forty cases only eleven, or 27·5 per cent., were associated with pre-existing lesions—viz., old scars in four cases, congenital lesions in two cases, suppurating sebaceous cyst in one case, soot wart in one case, wart of eighteen years' duration in one case, recent wound in one case, and chronic sinus in one case. In other words, the most careful examination, directed expressly to this end, failed to reveal the existence of any pre-existing local disease in 72·5 per cent of all cases. It is evident, therefore, that chronic inflammatory lesions cannot be regarded as the necessary antecedents of cancer; or in the great majority of cases the outbreak of this disease appears to be entirely spontaneous—that is to say, it cannot be attributed to the immediate action of any appreciable extrinsic cause whatever.

I am, Sirs, yours truly,

Preston, Feb. 6th, 1894. W. ROGER WILLIAMS.

THE GENERAL HOSPITALS AS MEDICAL AGENCIES:

A SIGN OF THE TIMES.

To the Editors of THE LANCET.

SIRS,—I am an old Guy's man, and if there is one thing we used to pride ourselves on more than another it was the way we "stuck together," and our pride and delight in our Alma Mater. If we wanted help we applied to the old hospital. From the days of old Monson Hills up to the present much respected Mr. Wells this was more particularly the case. If we hurriedly or otherwise wanted a locum or a partner the help was always given ungrudgingly and *without cost*. This was a great bond of union between old Guy's men and the present generation of students and, I think, was of great mutual advantage. To-day I received a circular which I must say has grieved me. This mutual help is now to be conducted on strictly business lines: 10*s.* 6*d.* if they find you a locum for a week's holiday or illness, 2½ per cent. if you seek a partner from the old school. Now I do not know what the profession generally will think of this action of a great hospital; my plan in the future will certainly be to apply to the usual agencies instead of the hospital, as

[1] Examen des Doctrines Médicales, Paris, 1821, tome ii., p. 700.
[2] Sammlung Klinischer Vorträge, Nos. 334-5, 1889.
[3] Middlesex Hospital Surgical Report, 1888 &c.

they, having the run of all the London hospitals, will be in a much better position to suit you at the same cost. So one more link with the past will have been broken. I cannot do better than sign myself with the old hospital motto,

I am, Sirs, yours truly,

Feb. 11th, 1894. "DARE QUAM ACCIPERE."

THE FUNCTION OF THE MEDICAL OFFICER OF HEALTH.

To the Editors of THE LANCET.

SIRS,—I enclose a letter which the clerk of the Garstang rural sanitary authority has just received from the Local Government Board in reply to a complaint of mine about the conduct of the medical officer of health in visiting and examining my private patients without my knowledge or consent, or without asking the consent of the patient or his friends. The medical officer of health declined to refer the proceeding to your decision or to that of any medico-ethical association, but claimed compulsory powers to examine all cases under the Public Health Act. The decision is the clearest and most definite the Local Government Board have yet given on the subject, and no doubt you will bring it before your readers and make some observations on it, as there is a good deal of doubt as to the duties of the medical officer of health in such cases.

I am, Sirs, yours truly,

Garstang, Feb. 11th, 1894. J. J. GORHAM, M.A., M.D.

Local Government Board,
Whitehall, S.W., Feb. 2nd, 1894.

SIR,—I am directed by the Local Government Board to advert to your letter of Dec. 28th last with reference to the representations which have been made by Dr. Gorham of Garstang as to the action of the medical officer of health for the Garstang rural sanitary district in visiting certain of his patients. As regards the general question of the medical officer of health's duties in connexion with cases of infectious disease I am to state that the Infectious Disease (Notification) Act, 1889, makes no difference in those duties, but merely extends his information as to the existence of cases of infectious disease. His duties as regards such cases are prescribed by Article 18 (6) of the Board's Order of March 23rd, 1891, of which a copy is enclosed.

It appears to the Board to be undesirable that the medical officer of health should in general undertake a personal diagnosis of the notified cases in order to test the accuracy of the certificates. In some cases, as where there is reason to doubt the good faith of the certifier or where the disease is one which in itself is or, owing to the attendant circumstances, threatens exceptional danger to the community, it may be desirable that the medical officer should make a personal diagnosis, but it must be remembered that this can only be done with the consent of the patient or those having charge of the patient, and that the medical practitioner in charge of the case should always be communicated with and his cooperation secured if possible.

I am, Sir, your obedient servant,

(Signed) ALFRED J. ADRIAN, Assistant Secretary.

J. Noble, Esq., Clerk to the Rural Sanitary Authority of the Garstang Union.

"THE CONDITION OF CHRIST'S HOSPITAL."

To the Editors of THE LANCET.

SIRS,—As the note in THE LANCET of to-day on the question of the "Condition of Christ's Hospital" evidently arises from a wrong conception of the scheme suggested by the Council of Almoners to the Commissioners of Sewers (for which scheme I am in a great measure responsible), and also suggests that it may be a "tinkering process," may I simply state the following facts:—1. That the specifications and plans submitted to the Commissioners are for a thorough reconstruction of the entire drainage system with new pipes and fittings throughout, proper manholes, and efficient ventilation of all the drains, as also absolute disconnexion from the street sewers, together with a reconstruction of all the water-closets and their approaches. 2. That the plans and specifications first sent in were subsequently submitted to the opinion of the well-known sanitary expert, Dr. Louis Parkes, lecturer on hygiene at St. George's Hospital. 3. That Dr. L. Parkes suggested certain improvements and wrote an additional report, which has been forwarded to the Commissioners of Sewers, and has given his written opinion to the council of Christ's Hospital that if the works suggested by us, and modified as he desires be carried out they will fully satisfy all the sanitary requirements and also comply with the notice under the Public Health Act served on Christ's Hospital by the Commissioners of Sewers. In my very responsible position here, and with a thorough knowledge of the existing defects in our sanitary system, it is hardly likely that I should give my unqualified approval to any half-measures; and the readers of THE LANCET and the public generally may rest satisfied that no "tinkering processes," "by which risks to the health and life of the Bluecoat boys would be run," have ever been suggested by—Yours faithfully,

H. ALDER-SMITH, F.R.C.S., M.B.Lond.,
Medical Officer to Christ's Hospital since 1870.

Upper Wimpole-street, W., Feb. 10th, 1894.

*** We are very glad to receive the disclaimer of any intent upon the part of the hospital authorities to sanction half-measures, but our note was not intended to contain the reflection that has been seen in it.—ED. L.

"EXPERIMENTAL DEGENERATION OF THE PYRAMIDAL TRACT."

To the Editors of THE LANCET.

SIRS,—In reference to the letter from Professor Horsley in the last issue of THE LANCET, I beg leave to state that when I recommenced the observations to which he refers I was unaware that anyone in Professor Horsley's laboratory or elsewhere had undertaken similar work, or was thinking of so doing. In October last Professor Boyce, on my meeting him at the Physiological Society, asked me whether I was working at the subject in question, and received from me a perfectly open reply about my work; it was at that time, and from Professor Boyce, that I first learned that work of a kindred scope was going on in Professor Horsley's laboratory. My own work had then been in progress several months. I felt surprised that Professor Horsley should not have mentioned the matter to me, but I supposed that he would do so prior to publishing the work. In the middle of the fourth week of January last Professor Boyce paid a visit to my laboratory on a different matter, but while there he told me that the work in question would appear that week. I again thought I should hear from Professor Horsley at once, and, not hearing, towards the end of that week I wrote the statement of my results, which appeared in THE LANCET of Feb. 3rd. As to Professor Horsley's assertion that I had told him some time ago that I had abandoned the work I have no recollection of having made that statement. It is true that, as is clear in my original note, I had given it up at one time, a time when there was in my experience no sufficiently sure method of tracing the degeneration; but on the introduction of the more suitable method it was only natural that I should open investigation by aid of it. It is on no account to be inferred from the above that I admit for one moment that Professor Horsley has any exclusive right to this research. As for his claim to its initiation, it is true that some years ago he addressed to me a letter on the subject, for which, perhaps, he can remember I wrote and thanked him at the time; but the problem had already been the subject of experiment altogether prior to his writing to me on the point. Professor Horsley has brought into the issue between himself and me the name of Professor Boyce. I have myself in consequence been obliged in this letter to make use of Professor Boyce's name. I wish at once to assure him that I should have scrupulously avoided such reference had it been possible.

I remain, Sirs, yours faithfully,

Feb. 13th, 1894. C. S. SHERRINGTON.

GENERAL PRACTICE, THE CLUB, AND THE HOSPITAL.

To the Editors of THE LANCET.

SIRS,—We all know that hospitals are abused and in some cases very much abused, but the assumption that the general practitioner is the chief sufferer from this abuse does not seem to be altogether justified. In the case of special hospitals it is the medical staff who suffer by giving advice to people who are able to pay for it and who would pay for it if they found that the advice could only be obtained in that way. In the case of the special hospitals it is not a question between the hospital and the general practitioner, but merely whether the patient is to go to the hospital or to pay properly for the advice of the surgeon. Possibly the general practitioner has more to complain of in the case of the general hospitals, but there is a set-off in regard to whatever loss he may sustain through hospitals of any kind in the fact that the vast majority of patients who attend hospitals are persons belonging to clubs. The hospitals, therefore, do a large part of the work which the general practitioner is paid for, and

which, in their absence, he would be called upon to do in fulfilment of his contract with the club.

It would be easy to ascertain the number of club members attending a hospital, to calculate the amount of work saved to the club practitioner, and to strike a balance between the certain gain, and possibly loss, he may incur by hospital work. While this investigation is in progress the club practitioner might well turn his attention to the abuses of the club system, for which he is responsible, and from which he loses incalculably more than by all the abuse of all the hospitals together. In this neighbourhood considerably more than one-third of the population obtain their medical advice and medicine for the contract sum of a penny a week or less, and every medical man is perfectly well aware that the system is scandalously abused and that there are very numerous instances of thoroughly well-to-do people taking advantage of these clubs. Again, we all know that during the last twenty-five years wages have greatly increased; still the club payments remain the same and have not increased within the memory of living man. Let the club practitioners raise their charge, if only by a halfpenny a week, and there will be an enormous increase of professional income without any hardship to the poor; and let well-to-do persons be informed that they can no longer be treated by charity. The present pressure of work on club practitioners is so great that they cannot in many instances do it properly—a fact which may have some influence on the number of persons attending the hospitals. We must unite and work for the common interest, then the club system will easily be improved.—I am, Sirs, yours truly,

Southampton, Feb. 10th, 1894. J. F. BULLAR.

"LIGATURE OF THE INTERNAL ILIAC ARTERY."

To the Editors of THE LANCET.

SIRS,—In the last issue of THE LANCET, in an annotation under the above heading, the case operated on by Mr. Pitts is mentioned as the *first* case of the "transperitoneal" or "diaperitoneal" method. I wish to point out that Mr. Treves had a case in 1889, and I have recorded another successful case last year by the intra-peritoneal plan, and there may be others. These patients were relieved, not cured. Mr. Treves' patient lived a year. The last account of my own leads me to believe that the pulsating tumour for which the operation was performed is growing again. The ligation operations may give immense relief, but are not adequate for the cure of malignant growths unsuitable for removal, though possibly the removal might be attempted after ligation. The difficulty of the operation is to avoid the large and swollen vein. It will be interesting to learn the facts and sequel of Mr. Pitts' case.—I am, Sirs, yours truly,

Feb. 13th, 1894. GEORGE WHERRY.

"DRUGGISTS' PRESCRIBING."

To the Editors of THE LANCET.

SIRS,—"W. M." in his letter says there is no law to prevent druggists prescribing for patients. This is not correct. The Apothecaries Act, by its 20th section, imposes a penalty of £20 on persons so offending. Mr. Justice Cresswell's observations in the case of the Apothecaries' Company *v.* Lolinger are much to the point. "But a chemist," says the judge, "is one who sells medicines which are asked for; whereas if you believe the evidence the present defendant himself *selected the medicines and determined on which he ought to give.*" I am, Sirs, yours faithfully.

Feb. 5th, 1894. M.R.C.S.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Is Vaccination of an Infant an Assault?

WHAT has been aptly described as "a storm in a tea-cup" has just been settled in the County Court. A boy in the workhouse was revaccinated by the medical officer of that institution. An action for assault was brought, and the judge upheld the contention of the guardians that any technical assault was justified in the interests of the institution. The Divisional Court revoked this decision on appeal, and remitted the case back to decide whether the boy was a consenting party. The jury this time, after hearing the arguments, came to the conclusion that the boy was a consenting party and that, having regard to the welfare of the workhouse, the operation was quite justified even if he had not consented. The verdict was therefore given for the defendant—the medical officer; it was also ordered that the costs of the two trials should be paid by the plaintiff, and that of the appeal divided. In the public safety this is a satisfactory conclusion to this long and vexatious case.

The Liabilities of Lead Workers.

A case of lead poisoning was the subject of an inquiry by the coroner on the 9th inst. The victim was a young woman aged twenty years, who was employed as a "dipper." The Government regulations appear to have been carried out in due form by the firm in question, and it was pointed out that the deceased had been cautioned to discontinue her work for a time, but refused to do so. The verdict was in accordance with the evidence. Cases of this kind are comparatively rare, and are the more to be regretted since ample precautions are known and promulgated in the places where these occupations are carried out. Many diseases of this nature are more or less preventable; the intelligence of the workers in dangerous occupations appears to end in a familiarity which breeds contempt and occasionally death, as in this instance.

District Nursing Society.

The twenty-second annual meeting of this society was held on the 8th inst. The report showed that during the year 23,497 visits had been paid by the nurses. The expenditure had been £754 2*s.* 11*d.*, and the income £997 15*s.*, mainly due to a legacy. The society is doing exceptionally useful and valuable work.

Feb. 13th

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Children's Hospital.

THE annual meeting of this hospital was held lately at the Fleming Memorial Building, erected, it will be remembered, for sick children by the generosity of the late Mr. John Fleming of Newcastle. The report showed that the number of in-patients treated had been 545 and the number of operations 279. Reference was made to the death of Lady Armstrong, who for many years had taken much interest in the institution, to which she was a generous subscriber. The financial state of the hospital was satisfactory. A suggestion was made with regard to the propriety of removing the children's wards at the infirmary to the hospital, but no action was taken on it. In the course of the meeting a complaint was made of the diminution of the contribution from the Hospital Sunday Fund. Indeed, all our charities are asking "more" from this fund; but perhaps if our citizens could swell the resources of the fund the request might be granted.

Durham County Hospital.

The annual meeting of this charity has been held, and from the report it appears that 496 in-patients have been treated. The expenditure was slightly in excess of the receipts, which included a bequest of £450 from the late Mr. J. G. Hargreaves of Durham. The out-patients numbered 1161, an increase on the previous year.

The Carlisle Urban Sanitary Authority and the Notification of Fever.

A difference of opinion has arisen between a medical practitioner in Carlisle and an urban sanitary authority of that city with regard to the notification of a case alleged by the sanitary inspector to be one of scarlet fever. The gentleman in question distinctly states that he did not notify because he did not know, nor is he yet certain, that the case was one of scarlet fever. The whole matter rests upon the evidence of a sanitary inspector who thought it was scarlet fever and entered it as such. At all events the case was properly attended to and isolated as far as was practicable with a baby. The medical officer of health of the city, it seems, was not at all clear that the case was one of scarlet fever. He further said that the medical man in attendance was the person legally responsible. He could not give any evidence about it in a court of law, but the facts, so far as he knew,

were against its having been scarlet fever. Every practitioner sees exceptional cases of scarlet fever, and opinions will, of course, vary until the nature of any particular case becomes clear. It is to be hoped that, in this instance, the board will not, under the circumstances, prosecute the medical attendant and bring the Notification Act into discredit with the public.

Death of a Border Medical Man.

The death is announced on last Wednesday, at his residence at Annan, of Dr. Nelson at the advanced age of eighty-two. He qualified so far back as 1834, going through part of his curriculum in Paris. I believe that he never was in active practice, but gave nearly the whole of his attention to horticulture, in connexion with which pursuit he was widely known. He was the introducer of several varieties of fruit-trees into the South of Scotland and the borders.

By the will of Mr. Hymers of Stokesley £1000 each is left to the North Ormsby Cottage Hospital and the Infirmary at Middlesbrough.

Newcastle upon-Tyne, Feb. 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Rabies in the West of Scotland.

THE authorities in Glasgow and in the county of Renfrew have at last proclaimed a three months' muzzling order for dogs, in view of the prevalence of rabies in Glasgow and in its vicinity. The order which has been issued states that dogs found at large unmuzzled and without a collar bearing the name and address of the owner will be destroyed. If this is done thoroughly the city should soon be rid of a multitude of owner-less and useless dogs which are a source of danger not only to men but to the canine race as well. The magistrates have acted on the recommendation to send bitten persons to Paris and they have undertaken to send to Paris, at the city's expense, in cases in which such aid is required, such persons as are bitten by rabid dogs. There is already a Glasgow constable in Paris undergoing treatment in the Pasteur institute; two more men have just gone in charge of Dr. A. K. Chalmers, our junior medical officer of health; while a fourth has gone to M. Pasteur at his own expense. It is worthy of note by our anti-vivisectionist friends that Dr. Chalmers has had to take with him, the spinal cord and part of the brain of the rabid dog in order that it may be definitely ascertained in Paris whether rabies was actually present. An effort was made to have this question settled at the University, but this was found to be impossible within a reasonable time on account of the preliminary forms which have to be observed before inoculation experiments on living animals can be carried out. General complaint was made at the Council meeting that there were no means in the country of dealing with rabies by M. Pasteur's method, and the hope was expressed that a Pasteur Institute would soon be established among us. Another patient from Paisley, a girl aged seven years, has just been sent to Paris for treatment by this method.

Public Health.

The death-rate during the past week was 20 per 1000, as against 22 in the three preceding weeks. It is noted that at this time last year there were 86 cases of small-pox in the city, while this year there is but one; and that as against 566 cases of measles last year there are now only 40.

Supervision of Dairies and Ice Cream Shops.

The recent decision in the High Court of Justiciary having shown that the sale of ice cream is not covered by the existing Acts regarding dairies, &c. and, further, as it is known that the sale of this commodity is in many instances fraught with great danger to the community, the members of a subcommittee of the town council are directing their attention to the amendment of the Food and Drugs Acts of 1875 and 1879 with the view of obtaining powers to supervise "ice-cream" manufacture.

Carbolic Acid for Carbolic Lotion: Damages.

Sheriff Guthrie has awarded sixteen guineas damages to a quay labourer who had been supplied with carbolic acid instead of carbolic lotion in a "doctor's shop" in Glasgow. The acid was applied to the patient's leg and "burned" it to such an extent that for some weeks walking or working was impossible. The "shop boy" (apparently not a qualified pharmaceutical druggist) seems to have given the patient's granddaughter directions to dilute the acid before using it, but the sheriff held that this was an insufficient precaution especially as the bottle was sent out without a proper label.

New Infirmary and New Hospital for Infectious Diseases for Paisley.

At last Paisley is to have a new infirmary, and not a day too soon, as the present building has become entirely unsuitable and inadequate to the demands made upon it. Twenty years ago, and again in 1886, efforts were made to have the institution removed to a more savoury locality, "where the sound of green leaves, the song of birds, and the freshness of the country might float into the rooms." The realisation of this dream has only lately become possible through the munificence of the trustees of the late Mr. W. B. Barbour, who have allocated £15,000 of the funds in their charge towards providing a new infirmary on a fresh site, that selected being in "Egypt Park," at the south end of the town, and in an open and healthy situation. The grounds extend to five acres—about five times the size of the present site. Up till the present time the hospital for infectious diseases has been conjoined in one series of buildings, with the infirmary for ordinary medical and surgical cases. This very objectionable arrangement will now be ended; and, as regards a new hospital for infectious diseases, the medical officer of health, Dr. Archibald Donald, has reported against repairing, remodelling, and taking over the old infirmary for such purposes, and argues very justly that the reasons which are found valid for removing the infirmary to better surroundings apply with even greater force to a hospital for infectious cases. There is a general feeling that this hospital also should be transferred to some suburban locality, not only for ordinary sanitary reasons, but also that ground may now be secured in order to permit of such future extension as the growth of Paisley may demand.

Feb. 14th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

The Ulster Hospital for Women and Children.

FROM the report presented at the twenty-first meeting of this institution, held on Jan. 31st, I find that during the past year there were 183 internal cases in the children's department and 2894 out-patients. There were 82 new internal cases in the women's wards, and 307 external eye, ear and throat cases. There is a balance in hand of £137 8*s.* 4*d.* Reference was made to the loss sustained by the death of Dr. Dill and by the resignation of Dr. Poole, who has removed from Belfast. Dr. Calwell (on his appointment as registrar at the Royal Hospital) has been relieved of part of his duties, and Dr. Scott has been appointed in his place.

Belfast Maternity Hospital.

At the hundredth annual meeting of this hospital, one of the oldest charities in Belfast, which was held on Feb. 6th, it was stated that during the past year the work of the hospital had been carried on most satisfactorily. The external department is steadily increasing and in the dispensary there was double the number prescribed for as compared with the previous year. It has been decided to change the name of the hospital (formerly Lying-in Hospital) to the Belfast Maternity Hospital. The question of enlarging the hospital is under discussion.

Feb. 14th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Diminution of the Mortality from Typhoid Fever in Paris.

DR. ROCHARD[1] states that the diminution in the lethal effects of typhoid fever has gone on steadily diminishing in Paris during the last twelve years. Thus, in 1869 the mortality reached 53·4 per 100,000 inhabitants, the corresponding figures for 1893 having been 25·7. The reason for this improvement is not far to seek: the dangerous beverage—Seine water—formerly largely consumed is now replaced by fairly pure spring water, and great progress has been effected in the drainage of the city. The Municipal Council has recently approved of a further large outlay for the purpose of extending the *tout à l'égout* system of drainage, and we

[1] Académie de Médecine, Jan. 30th, 1894.

shall doubtless witness a still greater fall in the mortality from enteric fever.

Activity of the Sanitary Authority.

The sanitary authority is showing commendable activity in disinfecting rooms in which deaths have occurred. I may mention an example which happened recently in my own practice. An Englishwoman died under my care in a hotel from Bright's disease and broncho-pneumonia. No sooner was the body removed than the disinfecting brigade came with their sublimate spray apparatus, and the men took away all portable articles for disinfection in the ovens. In this connexion I may add that great pressure is brought to bear upon households to induce them to submit to the process of revaccination. The other day a case of small-pox was discovered amongst the servants of a house in the Champs-Élysées. Immediately every family occupying flats in the house was served with a printed recommendation to be revaccinated (gratuitously) without delay.

A Certain Sign of Death.

M. Nicati[2] has invented an ophthalmotonometer, by the aid of which he has discovered that the tension of the globe of the eye, which is normally from 18 to 21 grammes, may oscillate, in the physiological state, between 14 and 25 grammes (T. = 0·4 to 1). This tension diminishes with the cessation of the heart-beats to 12 grammes, and the lowering of tension, interrupted by rebounds never exceeding 12 grammes, is afterwards progressive, until after the lapse of half an hour it has sunk to from 1 to 3 grammes. In two hours it is *nil*. The enucleated eye replaced in the orbit presents the same phenomena. The usefulness of this method in medico-legal medicine is self-evident, and M. Nicati claims for his instrument a further field of usefulness in general medicine, seeing that it can be employed in determining the blood pressure, the amount of which always bears a constant relation to that of the aqueous humour.

The Picric Acid Treatment of Superficial Burns.

The above mode of treatment has been employed with success in the wards of Dr. Tillaux at the Charité Hospital. Its simplicity is certainly a recommendation, and it is said never to produce irritation or poisonous symptoms, the only drawback being the dyeing of the parts of a persistent yellow colour. On the burns are laid, without any superimposed impermeable material, compresses of tarlatane soaked in a half per cent. solution of picric acid and then squeezed nearly dry. Should the wounds remain aseptic the dressings are renewed, at first every three, and then every four, five or six days. The dressing is said to allay the pain in a marked manner.

The Sanitary State of Toulon.

During the decennial period 1884–1893 the mortality in Toulon was 36 per 1000 (civil population equals 61,000). Excluding the two cholera years 1884–85 and replacing them by the two preceding years for the sake of fairness the mortality still remains at 34·7 per 1000. The mean mortality of 195 principal towns of France is only 25 per 1000. There thus die annually at Toulon an excess of about 600 persons, who owe their untimely fate to the insanitary conditions of the port. The yearly loss from typhoid fever is 153, or 18 per 10,000, for the period extending from 1880 to 1889. The soldiers and foreign sailors are the greatest victims to this disease. From 1879 to 1888 their typhoid mortality was 16 per 1000. Since then, thanks to improvements in drainage, and notably in the quality of the drinking water supplied, these figures have fallen to 5 per 1000. The typhoid fever mortality for the entire French army is, according to M. Brouardel, only 2·85 per 1000—a little more than half that at Toulon. It is evidently time the Toulonais were up and doing.

Feb. 6th.

[2] Académie des Sciences, Jan. 22nd, 1894.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—At the adjourned annual meeting of this association, held on Nov. 16th last, the Rules Committee was reappointed. After the holding of two meetings this committee has agreed upon recommending that the association shall henceforth consist of five divisions—viz., the two already existing (Scotland and Ireland), with the addition of three for England and Wales, to be named respectively the Northern, the South-Western, and the South-Eastern divisions. The rules of the association have accordingly been amended and revised in accordance with the above arrangement.

Obituary.

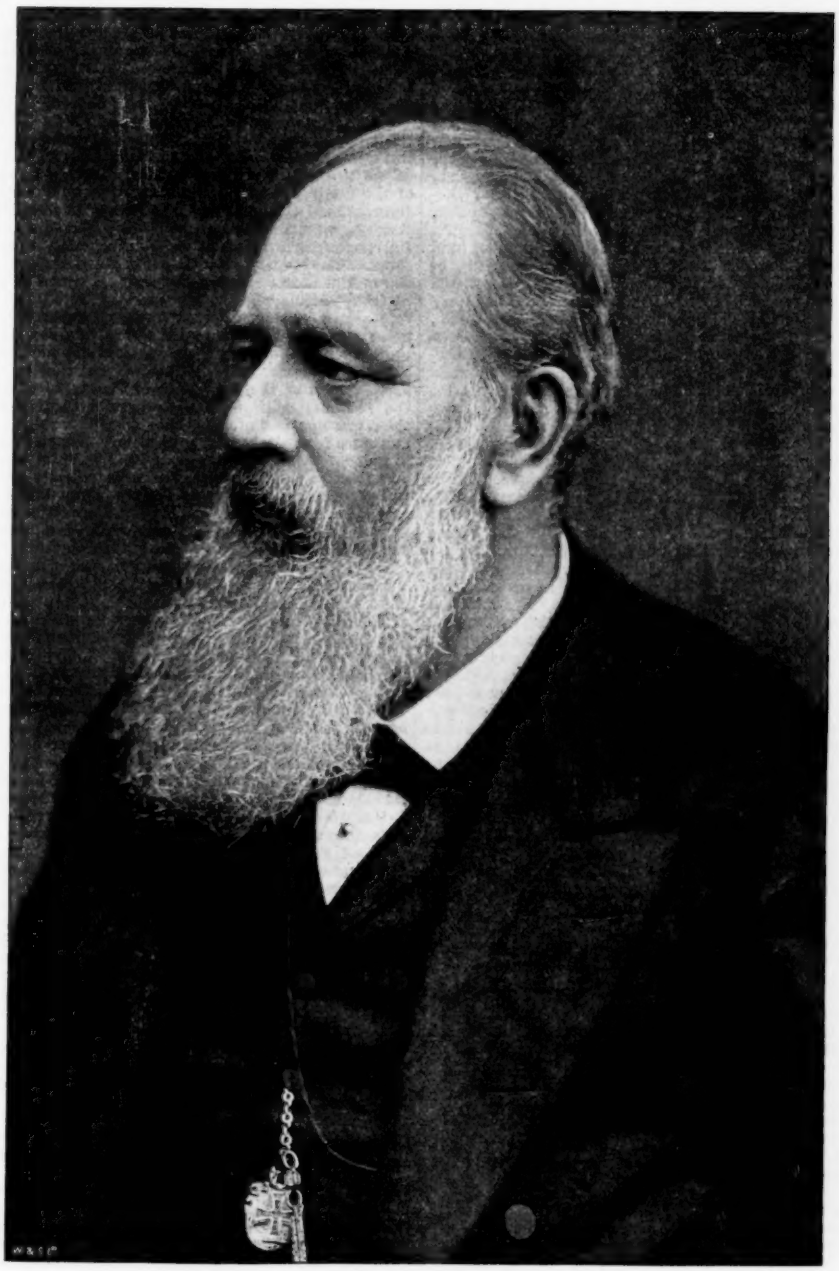
ALBERT CHRISTIAN THEODOR BILLROTH, M.D.

(PHYSICIAN AND PEER.)

IT will be long before the last word is said on the great surgeon, statesman, artist, and man of letters who died on Tuesday, the 6th inst., at Abbazia, on the Adriatic. He combined in his personality so many various endowments. In his union of power with gentleness, of discernment with tolerance, of self-concentration with all-including philanthropy, he impressed the multitudes who had the privilege of watching his daily life-work as a man of truly apostolic mould. No side-light, however casually thrown on him, failed to illustrate or confirm this estimate of his individuality. Take him as a politician. He had none of the defects of the merely party man, but, with an independence born of his devotion to truth, he supported whatever policy appeared to him well inspired, from whatever side it came. High in the esteem of the Kaiser, who, indeed, lavished on him distinctions innumerable, he took his seat in the Upper Chamber uncommitted to any political interest, and never spoke, as he never voted, but in the cause of enlightened evolution. Elected in 1891 as member of the Austrian Delegations, he made a speech, still remembered, on the War Budget and on the means of lessening the sufferings of the soldier, whether in quarters or on the battlefield—a speech for which, as it was said at the time, "Von Moltke would have hugged him." Starting from his own experience in the Franco-German war of 1870–71 he showed how the inevitable advance of military science, with its perfected arms of precision and its smokeless powder, would greatly increase the numbers of the wounded as compared with former international conflicts; how, in these circumstances, it would be impossible to disencumber the battlefield fast enough with the means of transport hitherto available; how a new system of lightly constructed cars was imperative; and how, for the methods of relief and tendance under fire or in ambulance, to keep pace with the rapidly developing engines of destruction, the rehabilitation of the Medico-Military Academy of Vienna was a first duty of the State, which, with incredible callousness to the victims of warfare, had allowed that most serviceable institution to collapse. Such was Billroth the public man; and such as he was in political life so he was in private, brimming over with love to his fellow man, and endearing himself not only to his household and to his kindred but to everyone with whom, on the most trivial of occasions, he came into contact.

A glance at his career will suffice to show the variety, the depth, the thoroughness of his powers. Of Swedish parentage and nephew of the head physician of Stettin, Wilhelm Friedrich Billroth, who greatly distinguished himself during the cholera visitations, he was born, a Pomeranian Prussian, at Bergen in the island of Rügen in the Baltic, on April 26th, 1829. From 1848 to 1852 he studied medicine at the Universities of Greifswald, Göttingen, and Berlin, and at the last-named he proceeded to the degree of Doctor with the dissertation "De Naturâ et Causâ Pulmonum Affectionis quæ, Nervo utroque Vago dissecto, exoritur." Later he went on an academic tour, in the course of which he attended the cliniques of Vienna, Prague, Paris, London and Edinburgh, and returned to become assistant surgeon in Berlin to the celebrated von Langenbeck. In 1856 he qualified in the same seat of learning as *privat-docent*, and in 1860 was invited to the University of Zurich to fill the chair of Surgery and the post of Director of the surgical wards. He won the highest reputation at the "Swiss Athens" as an operator and prelector, so that in 1867 he was unanimously called to the chair of Surgery in Vienna. Year by year in that great academic arena he added to his operative and professional triumphs. On the outbreak of the Franco-German War in 1870, he volunteered his services for the care of the wounded, and worked with equal energy and success in the lazarettos of Weissenberg and Mannheim. The experience thus acquired he turned to humanitarian account, as we have seen, and in his place in the upper Chamber at Vienna, to which the Kaiser promoted him in 1887, he laboured in every way to mitigate the horrors of which he had been an eye-witness. From his demonstration of the influence of the "hospital atmosphere" on wounds great practical good resulted; while at the Universal Exposition of 1873 he made the

HOFRATH THEODOR BILLROTH.



From a photograph by Professor Fritz Luckhardt, Vienna.

pavilion of military sanitation quite exceptionally attractive by the object lessons he provided in illustration of his army medical innovations and reforms. With all this the books, monographs, and papers he published were, in volume and in variety, quite stupendous. The bare catalogue of the chief among them fills one of the large quarto pages of the "Biographisches Lexikon der hervorragenden Aerzte aller Zeiten und Völker" (Biographical Dictionary of the Prominent Physicians of all Ages and Nations). The list is far too long for reproduction, but we may mention, as a standard work, not only for clearness of exposition, rigour of scientific tone, and practical utility, but also for exquisite grace of literary form, his "Allgemeine Chirurgische Pathologie und Therapie in Fünfzig Vorlesungen" (Fifty Lectures on General Surgical Pathology and Therapeutics), of which more than twelve editions have been published, and which has been translated into ten languages—English, French, Italian, Spanish, Hungarian, Polish, Russian, Servian, Croatian, and Japanese. Another book of more popular, though essentially scientific, tenour is his "Krankenpflege im Hause und im Hospitale: ein Handbuch für Familien und Krankenpflegerinnen" (Sick-Nursing at Home and in the Hospital: a Handbook for Families and Nurses), the merits of which are known to the world in many tongues, including Italian, Swedish, Danish, Russian, Polish, Croatian, Servian, and Roumanian. An incidental treatise, "Ueber das Lehren und Lernen der Medicinischen Wissenschaften an den Universitäten der Deutschen Nation, nebst allgemeinen Bemerkungen über Universitäten" (On Tuition in and Acquisition of the Medical Sciences at the German Universities; with some General Remarks on the Universities) (Vienna, 1876) sent a thrill through the Fatherland and has reacted for good on academic practice ever since.

As a surgeon Billroth's merits were almost unique. Baron Mundy said that he created the school of "initiative chirurgie"—the surgery, that is, that, not content with faithfully treading in the old paths, is continually adding new methods and contriving new operations, according as circumstances and conditions make them necessary. The bold assured handling of the knife was, in his case, the result of diagnosis carried to perfection, of anatomy artistic as well as scientific in its insight, and of a coolness and courage only second to the keenest sympathy with the patient under treatment. No incident, accident, or even catastrophe ever put him out or ruffled for a moment his equanimity. A pupil tells us that as late as November last, when his health had visibly been impaired by chronic pulmonary catarrh, an ether flask, upset in the operating theatre by an assistant, exploded with a loud report and set fire to the assistant's gown. In a twinkling there was a rush to the door, during which Billroth calmly extinguished the flames in the young man's garment, and resumed his exposition without change of tone or manner. Fear he had none, whatever the occasion. Referring to his own precarious health one day amid a group of friends he said his grandfather, his father and his brothers had all died from tuberculosis—"und trotzdem habe ich—bis jetzt wenigstens—keine Spur davon an mir bemerkt" (and in spite of that I have observed, till now at least, no trace of it in myself). He was, indeed, infinitely more solicitous for others than for himself, and it was noticed, even in his most difficult operations (resection of the stomach, extirpation of the larynx, and such like), that he never lost sight of the possible sufferings of the patient and tried, as far as the circumstances admitted, to minimise pain or even discomfort. As he moved about the operating theatre or wards, with his "Mantel" closely buttoned and the small cap on his head, with the delicate touch of an artist, the voice of a musician, and the language of a finished orator, he had the air of some academic patriarch and won the attention and the love of his pupils accordingly. Affectation or pomp of manner there was none, but in tones, not powerful so much as impressive, he knew how to attract and to convince the least observant or thoughtful, and to rivet the fact or doctrine in memories the least apt or retentive. A teacher of this stamp soon gathered round him an enthusiastic and devoted band of pupils, limited to no country or continent—Czerny of Heidelberg, Wölfler of Graz, Eiselsberg of Utrecht, Mikulicz of Breslau, Gersuny of Vienna, are a few of the prominent among his compatriots that occur to us; while beyond the Fatherland his name and influence were held in honour by numerous disciples and votaries. Of all the Teutonic delegates at the coming congress no one will be more missed than he.

For about two years Billroth had been suffering from bronchial catarrh, on which supervened an intermittent cardiac failure, causing moments of distressing asthma. His last extended journey was to Athens in the spring of 1893, and the summer of that year he spent in the neighbourhood of Salzburg, where his family possess a noble villa and where the local railway, recently opened, has a station called "Billroth" after him. About Christmas, not feeling well, he went to Abbazia, near Fiume, on the Adriatic, where the mild, tepid climate had relieved his symptoms once before. At midnight on the 5th inst., after supping with his wife and three daughters, he retired to rest, but very shortly afterwards a severe asthmatic fit occurred, and he died in the paroxysm.

The announcement of Professor Billroth's death evoked telegrams of sympathy from the whole medical world; of these, some were addressed to the widow of the deceased, others to the University of Vienna. Among the latter, one of the earliest to arrive was that from the President of the International Congress shortly to meet in Rome, Dr. Guido Baccelli, who, in the name of all the medical schools of Italy, expressed heartfelt condolence with their Austrian sister. The funeral, which took placd on the 9th inst., was one of the most impressive ever witnessed in a European capital. Medicine, science, literature, and art were all represented among the long train of mourners, while, in great numbers and reinforced from every country, followed the students, and after them an immense multitude of the Viennese citizens. The hearse was escorted by the Rector and Senatus of the University of Vienna, after whom came the teaching staff of the various medical corporations, the representatives of the other academic faculties, as well as delegates from the medical schools of Graz and Prague. Next in order were the old pupils of Billroth from the Austrian, the German, and the other European seats of learning, being succeeded by delegates from every learned body in science, literature, and art. At the benediction of the body in the Protestant Church the Imperial family were represented by the Archduke Rainer, while Court and Legislature assisted in the persons of the Minister the Marquess de Vacquehem, Count Schönborn, von Madeyski, Count Fallenhayn, and Dr. von Plener. The Corps Diplomatique also had its delegates, among other notabilities of every order and nationality. The Pfarrer Zimmermann concluded the ceremonial with an impressive valedictory homily on the deceased, after which the interment of the body took place in the Central burying ground. The Dean of the Medical Faculty, Professor von Vogl, led off the customary series of *oraisons funèbres*, and spoke in moving terms for the university; after him came Professor Gussenbauer of Prague, who gave expression, with much pathos and power, to the feelings of the old pupils of the deceased; and Dr. Rudolf Chrobak was the eloquent and touching orator of the Medical Society.

"A Holiday Contributor" writes under date, Vienna, Feb. 10th:—"At Hirschler's (the art publisher) there is on view an oil painting by A. F. Seligmann which is attracting great crowds, being entitled 'In Billroth's Lecture-room.' The great surgeon is seen, in hospital gown, at the operation table, on which an anæsthetised patient has just been artistically laid. To the right may be recognised Billroth's assistants, Baron Eiselsberg, M.D., Dr. Joseph Winter and, somewhat farther away, Dr. Dittel with Professor Salzer—all at the head of the table. On the left Dr. Böttcher is handing a 'pincette' to Billroth, while Dr. Heidenthaler is eyeing the hospital attendant who holds the patient's feet. On a narrow bench about a step from the table sits, beside two well-known physicians, the 'Royal Surgeon' Duke Karl Theodor of Bavaria (lately described in THE LANCET), gazing fixedly on the patient. At the back of his Royal Highness other benches are occupied by general practitioners, while the class are seen ranged tier upon tier in the ampitheatre behind the master. The whole 'auditorium' looks with eager attention on the operator, and, leaning forward, hangs breathlessly on the clear and simple words with which he explains the details of a manifestly complex and critical case. The painting has already been exhibited in the Art Salon and is deservedly high in popular favour. A print or photograph taken from it would find many admirers outside Vienna if its points were thus made accessible to a wider public."

The feeling produced at Vienna by his death was thus expressed in the last words used in the obituary article of the *Wiener Medicinische Blätter*—"Das Andenkin Billroth's wird ewig gesegnet bleiben! Gott schütze die Facultät!" The memory of Billroth will be for ever blessed! God help the faculty!

AUGUST HIRSCH, M.D.

THIS able and scholarly physician represented a type less frequently met with in the British Isles than abroad—to wit, the all-accomplished medical man who devotes his life to the history of the healing art. His career was as honourable as it was versatile. Born on Oct. 4th, 1817, at Dantzic, he was (after profiting by the excellent gymnasium of his native town) articled to a merchant, but he did not take kindly to commerce. Fascinated by the study of medicine, he proceeded to the Universities of Leipsic and Berlin, and after the usual four years' course he graduated with much distinction at the latter seat of learning in 1843, his graduation thesis being still remembered for its originality of view and thoroughness of handling: "De Laringostasi Exsudativâ vulgo 'Croup' vocatâ." After a brief interlude of practice at Elbing he settled in his native Dantzic, devoting himself with ardour to geographico-pathological study, with a view to qualifying for the career he had most at heart—that of medical officer in British India. The first outcome of his labours was his paper, published in the Hamburg *Medicinische Zeitschrift*, on "Die Geographische Ver breitung von Malariafieber und Lungenschwindsucht und den räumlichen Antagonismus dieser Krankheiten" (The Geographical Diffusion of Malaria and Pulmonary Phthisis and the Broad Antagonism of these Diseases), which was quite an epoch-making treatise. This was followed by "Historico-pathological Investigations on Typhus Diseases, with Special Regard to the Typhus of Recent Times"; by "Diarrhœa according to its Endemic and Epidemic Incidence from the Etio-pathological Standpoint"; and by "The Indian Plague and the Black Death: a Historico-pathological Sketch." This latter appeared in *Virchow's Archiv* and established the writer's reputation as an epidemiologist. Passing over such instructive and luminously written treatises as that on "Miliary Fever in its Historical and Geographico-pathological Aspects," and "The Madura Foot: a Contribution to the History of Vegetable Parasitism," we come to his *chef-d'œuvre*, "Handbuch der Historisch-geographischen Pathologie," of which a translation by Dr. Charles Creighton was made for "the New Sydenham Society, and of which the main positions have long since been incorporated in the most authoritative encyclopædias of medical science. In 1863 he was called to the chair of Ordinary Professor of Medicine in Berlin, and signalised his entering on its duties by his truly classical dissertation entitled "De Collectionis Hippocraticæ Auctorum Anatomiâ, qualis fuerit et quantum ad Pathologiam eorum valuerit" (On the Anatomical Science of the Authors of the Hippocratic Collection: what it amounted to and what value it possessed for their pathology). Two years thereafter he was commissioned by the Government to study the epidemic of cerebro-spinal meningitis by which West Prussia was then visited, and the results of his minute and extended observations were embodied in his book "De Meningitis Cerebro-spinalis Epidemicâ" (Berlin, 1866). During the Franco-German war of 1870–71 he was directing physician of a royal sanitary train and two years thereafter coöperated with Pettenkofer in forming the Cholera Commission for the German Empire, as a member of which he made personal inquiries into the epidemic as it then raged in West Prussia and Posen. The reputation which this work brought him led to his appointment as delegate of the German Empire at the International Cholera Conference held at Vienna in 1874.

His next departure was again at the instance of the Imperial Government, when he accompanied Dr. Sommerbrodt and Professor Küssner to Russia, there to study the plague as it occurred in the province of Astrakhan, the result of their conjoint labours being the "Mittheilungen über die Pest-Epidemie im Winter 1878-79 im Russischen Gouvernement Astrachan" (Communications on the Epidemic of Plague in Russian Astrachan in the Winter of 1878–79), an exhaustive account of the epidemic. After this treasure-house of research we need only particularise such minor treatises—all of them valuable—as his History of Eye Diseases and their Treatment (forming the seventh volume of von Graefe's and Saemisch's encyclopædia of that department of the healing art); his "Mode of Combating Popular Epidemics, with special regard to Cholera"; his "Diffusion of Yellow Fever"; his answer to the question, What has Europe to fear in Modern Times from the Eastern Plague? to say nothing of such *πάρεργα* as his edition of Hecker's master-work on the popular maladies of the middle ages. He coöperated with Virchow in the production of the "Jahresbericht über die Fortschritte und Leistungen in der Medicin" (Annual Report on the Progress of, and Achievements in, Medicine), and was joint-editor of the great Dictionary of Medical Biography of all Times and Peoples published at Leipsic and Vienna. His last work was in some respects best—"Geschichte der Medicinischen Wissenschaften in Deutschland" (The History of the Medical Sciences in Germany) (Munich and Leipsic, 1893)—truly a labour of love, in which, after a masterly survey of the history of the healing art in ancient and mediæval times, he takes up his country's contributions to medicine, as an art and as a science, century by century, beginning with the seventeenth and advancing, with increased fulness of detail and expository power, till the last great revolution effected by the Müller-Schönlein school in Berlin. Thoroughly Catholic in his sympathies and quite judicial in his impartiality, he omits no epoch-making name which wrought any influence on German thought or practice; witness his hearty and detailed acknowledgments of what his compatriots owe to Great Britain, to France, and to Italy. Where he puts forward a claim on his country's behalf to original and even exclusive merit he does so with comprehensive knowledge and with cogent reasoning—as, for instance, when he vindicates for it the resuscitation—or rather rehabilitation—of the "natural history method" adumbrated by Hippocrates. This closes his book, and may fitly be taken as the crowning achievement of studies which left no field of medicine unexplored and withheld from no honest and able worker his due meed of praise.

INSPECTOR-GENERAL R. LAWSON, L.R.C.S.EDIN., LL.D.

HON. PHYSICIAN TO THE QUEEN; ARMY MEDICAL DEPARTMENT (RETIRED).

THOSE who have been in the habit of attending the meetings of the Epidemiological, the Royal Statistical, and other learned Societies in the metropolis will miss the conspicuous presence of Inspector-General Lawson, who so frequently took part in the reading of papers and in the discussions that followed. The deceased officer was one of the most honest, industrious, and accurate of men. Whenever he undertook the examination of any subject he spared no pains to ascertain all the facts; he was thorough, and consequently reliable, and generally showed himself a strong exponent of the views he advocated, and a logical adversary in debate. These qualities, added to his long experience and varied knowledge, will cause him to be greatly missed in an age which is somewhat too much given to the play of the scientific imagination and too little disposed to the exercise of laborious and patient investigation and a hard-headed appreciation of facts. Inspector-General Lawson was a very learned as well as an able man; he possessed a good deal of Scotch "grit" in his character, and if he lacked imagination he was by no means deficient in shrewdness and humour. His thoroughness and honesty, and his experience and attention to detail, made him invaluable on a committee, and the excellent work, as well as the amount of work, that he performed for Government in this respect without fee or reward of any kind was really very considerable. During his service in the army he always showed a keen love of science and of his profession, and not only pursued sanitary and etiological investigations, but took up medical and pathological questions with a considerable amount of enthusiasm and with the aid of the modern appliances of a microscope and test-tubes. It seems almost paradoxical to say that his love of facts and figures made him at once practical and speculative. Whenever he could apply a foot-rule philosophy and common-sense to questions he did so, and he would often wreck some theory or view that was being advocated by showing what it would cost in the aggregate or what it would amount to when pushed to a logical conclusion. On the other hand, by the contemplation of a vast collection of figures in statistical array he was led to formulate a speculative belief in the existence and influence of pandemic waves in the diseases affecting mankind. Of late years his friends could not fail to notice that age had begun to tell upon him; but he had always during his long life enjoyed vigorous health and was full of physical and mental energy—he was tall of stature, strong, and active. He died at 4, Carden-place, Aberdeen, on the 8th inst. at the age of seventy-nine. He entered the army as an assistant surgeon in 1835 became surgeon in 1845, deputy inspector-general in 1854, and inspector-general of hospitals in 1867, and retired on half-pay in 1872. He was present at the storming and destruction of the fortified Mandingo town of Sabajee on the Gambia in 1853,

and served in the Crimea during 1854 and 1855. He received the Crimea medal with Sebastopol clasp, the 4th class of the Medjidieh and the Turkish medal. The degree of LL.D. was conferred upon him in 1884 by the University of Aberdeen, and he was appointed one of the Honorary Physicians to the Queen in 1891. Whilst serving in the army he was eminently just and kind to all under him and the advocate and true friend of those who showed any unusual industry, ability, or merit. His sense of duty was always very strong, and he never spared himself in the way of personal trouble and painstaking to discharge such duties as fell to his lot conscientiously and well. He contributed numerous papers to medical societies and medical periodical literature.

Professor Ogston of Aberdeen has been kind enough to forward us the following interesting particulars :—

"By his death the profession loses a man of note and the Army Medical Service a landmark and an ornament. Mr. Lawson was born in 1815 and belonged to an Aberdeenshire family. He graduated as Licentiate of the Royal College of Surgeons in 1834, and was appointed assistant surgeon in the army on May 15th, 1835. He served in the West Indies and the West Coast of Africa, and showed thus early the scientific bent of mind that pervaded the whole of his career by observations regarding meteorology and the laws of storms—a subject which was at this time little regarded and only in its infancy. He was one of the earliest to draw attention to the rotation theory of cyclones, but his work in this respect, like much of his later work, was ahead of his time, and did not attract the notice it deserved. He further made valuable observations concerning the spread of malarial disease and yellow fever by means of air-currents and prevailing winds, and the natural means of protection from their spread by such causes. There are now only two officers alive who ever served as inspector-general of hospitals, a rank which became obsolete under the Royal Warrant of March 1st, 1873, one of those remaining, Mr. Arthur Anderson, C.B., being, like himself, an Aberdonian. His retirement from the army in 1872 did not entirely break his connexion with the service, as he acted on several commissions, and assisted in the development of the modern system of ambulance. He was an active member of the Epidemiological and Statistical Societies, and was president of the former. In their Transactions and elsewhere a large number of publications have appeared from his pen at various times, dealing chiefly with the methods by which cholera and other epidemic diseases are spread; and he delivered the Milroy Lectures, in 1888, on Epidemic Influences, Yellow Fever, and Cholera. Perhaps the best known of his labours, at least among the general profession, were those referring to the progress of epidemics from north to south of the earth at a given rate of progress at right angles to the distribution of the isoclinal lines of the magnetic dip, which were termed the pandemic waves. Having access to the records of the Army Medical Department, he collected a great body of statistics bearing on this point showing the influence of these waves on all infectious diseases.

"In the autumn of 1893, owing to failing health, he left London, where he had resided since his retirement, and settled in Aberdeen, where his health gradually continued to fail until his death. He was much beloved and respected by all with whom he was brought into contact, and will long be sincerely mourned by those who were privileged to be his intimates. The kindly and high-minded old man, full of accurate and interesting knowledge, and of theories and deductions from carefully sifted facts often considerably in advance of even the present time, will not readily be forgotten by many members of the Army Medical Department, the general profession, and private friends. He was buried in the Nellfield Cemetery at Aberdeen on Feb. 12th."

Medical News.

UNIVERSITY OF LONDON.—The following candidates passed the Intermediate Examination in Medicine in January, 1894 :—

ENTIRE EXAMINATION.

FIRST DIVISION.

Dodgson, Robert William, St. Mary's Hospital.
Drury, Edward Guy D., St. Bartholomew's Hospital.
Dyball, Brennan, St. Thomas's Hospital.
Huggins, Sydney Penrose, St. Bartholomew's Hospital.
Leicester, J. Cyril H., B.Sc., University College.
Noble, Hugh Percy, Middlesex Hospital.
Waldron, Francis Thomas, London Hospital.

SECOND DIVISION.

Chandler, Francis William, University College.
Dixon, Walter Ernest, B.Sc., St. Thomas's Hospital.
Farrant, Mark, Westminster Hospital.
Flint, Ella Catherine, London School of Medicine for Women.
Frazer, William Dyer, St. Thomas's Hospital.
Goring, Charles Buckman, University College.
Green, Howard, Charing-cross Hospital.
Hull, Charlotte Elizabeth, London School of Medicine and Birkbeck Institute.
Innes, Hubert, London Hospital.
Ketchen, Arthur Dickson, University College.
Maxwell, John Preston, St. Bartholomew's Hospital.
Patch, Winifred S., B.Sc., London School of Medicine for Women.
Robertson, James, Guy's Hospital.
Savage, William George, University College.
Scowby, Edward Thomas, Guy's Hospital.
Thomas, Rhys Tudor, University College.
Tucker, Ernest Frederick Gordon, London Hospital.
Waterhouse, Rupert, St. Bartholomew's Hospital.
White, Sarah Elizabeth, B.Sc., London School of Medicine for Women.
Wilkins, Walter, Charing-cross Hospital.
Wise, Harry Mortimer, Guy's Hospital.

EXCLUDING PHYSIOLOGY.

FIRST DIVISION.

Brigstocke, Percy Ward, St. Bartholomew's Hospital.
Cowin, Douglas H. F., St. Bartholomew's Hospital.
Harcourt, John Charles, St. Thomas's Hospital.
Marks, Leonard Freeman, St. Bartholomew's Hospital.
Murray, John Hanna, University College.
Rait, John Walter Forbes, University College.

SECOND DIVISION.

Bahadhurji, Jamsetji Nassarvanji, University College and Birkbeck Institute.
Binckes, Frederick William, St. Thomas's Hospital.
Box, Stanley Longhurst, St. Bartholomew's Hospital.
Emms, Harry Robert, University College.
Goffe, Ernest George Leopold, University College.
Leon, John Temple, B.Sc., St. Mary's Hospital.
Seal, Francis Montgomery, University College.
Shepherd, Ernest, St. Mary's Hospital.
Sibley, Reginald Oliver, St. Mary's Hospital.
Spicer, Arthur Herbert, Guy's Hospital.
Stuart, Walter Lee, Guy's Hospital.
Trimble, Charles Edward, University of Edinburgh.
Tucker, Alexander Benjamin, St. Bartholomew's Hospital.

PHYSIOLOGY ONLY.

SECOND DIVISION.

Atkinson, Frederick Holgate, Charing-cross Hospital.
Brash, John Bardsley, University College.
Bucknall, T. Rupert Hampden, University College.
Chave, Thomas, St. Bartholomew's Hospital.
Coleman, Maurice Were, St. Bartholomew's Hospital.
Griffiths, J. Alban Kendall, University College.
Hugo, James Henry, St. Bartholomew's Hospital.
Hutton, Albert Edward, Yorkshire College.
Skey, Arthur Richard Harrie, St. Bartholomew's Hospital.
Steele, Charles Francis, Bristol Medical School and University College.
Steinhaeuser, John Robert, Guy's Hospital.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on the 1st inst. the following gentlemen obtained the degrees of Bachelor of Medicine and Bachelor of Surgery—viz. :—

Saw, Athelstan J. Henton, Trinity.
Storrs, Charles Simonds, Emmanuel.
Windsor, Charles Wm., non-collegiate.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations and having conformed to the by-laws and regulations, were, at the ordinary meeting of the Council on the 8th inst., admitted Members of the Council :—

Allen, William Herbert, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Appleyard, Francis Edward, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Austin, James Herbert, L.R.C.P. Lond. and M.D. Toronto, Trinity College and Toronto University, Canada.
Axford, Sidney Bertram, L.R.C.P. Lond., Charing-cross Hospital.
Bannerman, George Douglas King, L.R.C.P. Lond., London Hospital.
Barrow, Arthur Silbert, L.R.C.P. Lond., Middlesex Hospital.
Barrow, George Augustus, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Bennett, James Henry, L.R.C.P. Lond., London Hospital.
Beresford, Ralph, L.S.A., Aberdeen, Belfast, Sheffield, and Middlesex Hospital.
Brooke, Baron, L.R.C.P. Lond., King's College Hospital.
Burrow, Thomas, L.R.C.P. Lond., Guy's Hospital.
Clarkson, George Aylwin, L.R.C.P. Lond., St. George's Hospital.
Colby, Francis Edward Albert, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Coleman, James George Blyth, L.R.C.P. Lond., Guy's Hospital.
Collcutt, Arthur Maurice, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.

Cooper, Francis Bastow, L.R.C.P. Lond., Firth College and General Infirmary, Sheffield.
Corbould, Victor A. L. Edward, L.R.C.P Lond., Charing-cross Hospital.
Cory, Charles George, L.R.C.P. Lond., St. Bartholomew's Hospital.
Crowley, John Henry, M.B., B.S. Melb., Melbourne University.
Cutting, Ernest Buxton, L.R.C.P. Lond., St. Bartholomew's Hospital.
Dalby, John Lyttleton J. B., L.R.C.P. Lond., St. Bartholomew's Hospital.
Davies, Samuel Hugh Rattray, L.R.C.P. Lond., St. Thomas's Hospital.
De Jong, Edward Meyer, L.S.A., Owens College and Royal Infirmary, Manchester.
Denny, Arthur William, L.R.C.P. Lond., Charing-cross Hospital.
Dickens, Charles Henry, L.R.C.P. Lond., St. Thomas's Hospital.
Dobson, Arthur, L.R.C.P. Lond., St. Thomas's Hospital.
Duffett, Henry Allcroft, L.R.C.P. Lond., Guy's Hospital.
Dunstan, Charles Harvey, L.R.C.P. Lond., London Hospital.
Ellerton, Henry Byam, L.R.C.P. Lond., St. Mary's Hospital.
Elliot, Ernest Edward, L.R.C.P. Lond., St. Bartholomew's Hospital.
Emerson, Herbert Bree, L.R.C.P., Lond., Middlesex Hospital.
Ewing, Samuel Arthur, L.R.C.P. Edin., Melbourne, Paris, Edinburgh, and King's College Hospital.
Fagge, Robert Hilton, L.R.C.P. Lond. Guy's Hospital.
Farnum, Charles Mortimer Stone, L.R.C.P. Lond., King's College Hospital.
Fenwick, Percival Clennell, L.R.C.P. Lond., St. Thomas's Hospital.
Fisher, Reginald Willis, L.R.C.P. Lond., St. Bartholomew's Hospital.
Fosbery, Francis Clifford, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Grend, Eustace Clifford, L.R.C.P. Lond., St. Bartholomew's Hospital.
Gittins, Alfred Benjamin, L.R.C.P. Lond., Anderson's College, Glasgow, and London Hospital.
Grunbaum, Albert Sidney Frankau, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Gurney, Alexander Cecil, L.R.C.P. Lond., St. Bartholomew's Hospital.
Halliwell, Thomas Oates, L.R.C.P. Lond., St. Thomas's Hospital.
Hawes, Godfrey Charles Browne, L.R.C.P. Lond., St. George's Hospital.
Henderson, William Douglas, L.R.C.P. Lond., St. Thomas's Hospital.
Hickman, Henry Richard Belcher, L.R.C.P Lond., Oxford University and St. George's Hospital.
Hoare, Edwin Stanley, L.R.C.P. Lond., Guy's Hospital.
Hovenden, Gerald Stanley, L.R.C.P. Lond., Guy's Hospital.
Hoyten, William James, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Hudson, John Samuel, L.R.C.P. Lond., St. Thomas's Hospital.
Huskinson, Harold, L.R.C.P. Lond., St. Thomas's Hospital.
Hutley, William Charles, L.R.C.P. Lond., St. Bartholomew's Hospital.
Jackson, Richard, L.R.C.P. Lond., London Hospital.
Jenkins, Herbert Thomas, L.R.C.P. Lond., University College Hospital.
Jones, Charles Albert, L.R.C.P. Lond., London Hospital.
Jones, William David, L.R.C.P. Lond., University College Hospital.
Kennington, Edgar, L.R.C.P. Lond., St. Bartholomew's Hospital.
Kerswill, Harry, L.R.C.P. Lond., St. Bartholomew's Hospital.
Kirton, Reginald Gower, L.R.C.P. Lond., London Hospital.
Lawrence, George, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Lawson, Kenneth, L.R.C.P. Lond., Middlesex Hospital.
Leete, Arthur Henry, L.R.C.P Lond., Guy's Hospital.
Lindsey, Colin Dunrod, L.R.C.P. Lond., St. Mary's Hospital.
McCardie, William Joseph, L.R.C.P. Lond., Cambridge University and General and Queen's Hospitals, Birmingham.
McCone, James Francis, L.R.C.P. Lond., M.D. California, California University and St. Bartholomew's Hospital.
Marsh, John Hedley, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Meakin, Harold Budgett, L.R.C.P. Lond., St. Bartholomew's Hospital.
Meegs, Theodore Hugh Egbert, L.R.C.P. Lond., Westminster Hospital.
Miles, Henry Pole, L.R.C.P. Lond., University College Hospital.
Mignes, Robert Stanley, M.D. Kingston, Queen's College and University, Kingston, Canada.
Mitchell, James Edwin Henry, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Oldfield, Herbert Edgar, L.R.C.P. Lond., Charing-cross Hospital.
Orme, William Bryce, L.R.C.P. Lond., University College Hospital.
Park, William Charles Cunningham, L.R.C.P. Lond., Guy's Hospital.
Passmore, Joseph Ernest, L.R.C.P. Lond., London Hospital.
Peake, Frederic Ernest, L.R.C.P. Lond., University College and General Hospital, Bristol.
Pereira, Joseph Anthony Wenceslaus, L.R.C.P. Lond., L.M. & S. Bombay, Grant Medical College, Bombay, and Charing-cross Hospital.
Phillips, Frederick George Mevnell, L.R.C.P. Lond., Guy's Hospital.
Pinniger, Walter Augustus, L.R.C.P. Lond., London Hospital.
Pollard, Walter Henry, L.R.C.P. Lond., St. Bartholomew's Hospital.
Powys, Henry Lionel, L.R.C.P. Lond., London Hospital.
Reid, Edgar, L.R.C.P. Lond., Guy's Hospital.
Ridsdale, Arthur Errington, L.R.C.P. Lond., St. Thomas's Hospital.
Roche, Redmond John, L.R.C.P. Lond., Royal College of Surgeons and Richmond Hospital, Dublin.
Romer, Harry, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.
Rubel, John Leopold, L.R.C.P. Lond., King's College Hospital.
Russell, Charles Henry, L.R.C.P. Lond., Charing-cross Hospital.
Rutherford, Alfred Ernest Raif, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Ryall, Charles, L.R.C.P. Lond., Westminster Hospital.
Shaw, Arthur Priest, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Simpson, Frederick Hampson, L.R.C.P. Lond., Guy's Hospital, Durham University, and Birmingham.
Smith, Reginald Nitch, L.R.C.P. Lond., Westminster Hospital.
Snowman, Jacob, L.R.C.P. Lond., London Hospital.
Stewart, Charles Howard, L.R.C.P. Lond., St. Thomas's Hospital.
Storey, Percy Arthur, L.R.C.P. Lond., University College Hospital.
Strand, Alick Condell, L.R.C.P. Lond., Middlesex Hospital.
Sutter, Robert Ross, L.R.C.P. Lond., Aberdeen University and St. Thomas's Hospital.
Symons, Robert Fox, L.R.C.P. Lond., St. Thomas's Hospital.
Symons, Thomas Henry, L.R.C.P. Lond., Charing-cross Hospital.
Taylor, Ashby, L.R.C.P. Lond., Anderson's College and Royal Infirmary, Glasgow.
Taylor, Edwin Claude, L.R.C.P. Lond., Guy's Hospital.
Taylor, John William, L.R.C.P. Lond., University College and General Hospital, Bristol.
Terry, John, L.R.C.P. Lond., St. Thomas's Hospital.
Thorp, Arthur Edward, L.R.C.P. Lond., St. Thomas's Hospital.
Todd, Lancelot Bew, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Tomlinson, Lionel Philip, L.R.C.P. Lond., St. George's Hospital.
Tuck, Ernest Sydney, L.R.C.P. Lond., Guy's Hospital.
Twemlow, William Albert Fytch, L.R.C.P. Lond., Westminster Hospital.
Wakeling, Thomas George, L.R.C.P. Lond., St. Bartholomew's Hospital.
Walker, Arthur, L.R.C.P. Lond., Owen's College and Royal Infirmary, Manchester.
Wallace, Lewis Alexander Richard, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.
Warren, Charles Frank, L.R.C.P. Lond., St. Mary's Hospital.
Watson, Charles Henry, L.R.C.P. Lond., Middlesex Hospital.
Way, William, L.R.C.P. Lond., Middlesex Hospital.
Weston, Arthur Ernest, L.R.C.P. Lond., St. George's Hospital.
Whelpton, Edward Smith, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Whichells, Harold, L.R.C.P. Lond., St. Thomas's Hospital.
Whittingham, George Matthew Young, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester, and St. Mary's Hospital.
Wilkinson, George, L.R.C.P. Lond., Cambridge University and St. Mary's Hospital.
Willway, Frederick William, L.R.C.P. Lond., University College and General Hospital, Bristol.
Winter, Edward Stuart, L.R.C.P. Lond., St. Bartholomew's Hospital.
Witham, Henry, L.R.C.P. Lond., Westminster Hospital.
Wonnacott, Richard Reginald Howard, L.R.C.P. Lond., London Hospital.
Wood, William Charrington, L.R.C.P. Lond., St. Mary's Hospital.
Wrangham, John Marris, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Wray, William Thomas, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds, and Middlesex Hospital.
Wrinch, Edwin Percy, L.R.C.P. Lond., Durham University and St. Thomas's Hospital.
Wyllys, William, L.R.C.P. Lond., St. Bartholomew's Hospital.

The following gentlemen, having previously passed the necessary examinations, and having now attained the legal age of twenty-five years, were admitted Fellows of the College:—

Miles, William Ernest, L.R.C.P. Lond., St. Bartholomew's Hospital; diploma of Membership dated July 30th, 1891.
Clegg, John Gray, M.B., Ch.B. Vict., Owens College and Royal Infirmary, Manchester; Nov. 12th, 1891.

EXAMINING BOARD IN ENGLAND, BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen, having passed the necessary examinations, have been admitted by the two Colleges Diplomates in Public Health:—

Adams, Edmund Weaver, L.R.C.P. Lond., M.R.C.S. Eng., King's College Hospital.
Bolton, Alfred, L.R.C.P. Lond., M.R.C.S. Eng., Guy's Hospital.
Brown, Richard King, M.B. and B.Ch. R.U.I., Queen's College, Belfast, and University College Hospital.
Close, Henry Ashlin, Deputy-Inspector-General, R.N., L.R.C.P. Lond., M.R.C.S. Eng., St. Bartholomew's Hospital.
Elkington, Henry Percival George, Surgeon-Captain, Army, L.R.C.P. Lond., L.S.A., St. George's and University College Hospitals.
Harris, Frank Drew, L.R.C.P. Lond., M.R.C.S. Eng., St. Mary's Hospital.
Hatch, Herbert Lincoln, L.R.C.P. Lond., M.R.C.S. Eng., St. Mary's Hospital.
Henderson, James Threapland, L.R.C.P. Lond., M.R.C.S. Eng., Yorkshire College and General Infirmary at Edinburgh.
Illingworth, Charles Rumney, M.D. Edin., M.R.C.S. Eng., Edinburgh University and King's College Hospital.
Oakeshott, Walter Field, L.R.C.P. Lond., M.R.C.S. Eng., St. Bartholomew's Hospital.
Toogood, Frederick Sherman, M.D. Lond., M.R.C.S. Eng., University College and London Hospitals.
Thompson, Wilberforce, L.R.C.P. Lond., M.R.C.S. Eng., Yorkshire College and General Infirmary, Leeds.
Watson, Joseph Riley, M.B. and C.M. Edin., Edinburgh University.

Nine candidates were referred for six months.

BLACKBURN INFIRMARY.—The annual report, just issued, is a satisfactory record of the good work accomplished during the past year, notwithstanding the drawbacks, firstly, of an outbreak of scarlet fever, which materially impeded the work of the institution; and, secondly, of the decrease of income arising from the commercial depression. The total receipts, however, exceeded the year's expenditure; £500 was transferred to the building fund, and the endowment fund was augmented by several donations and legacies. The "Yerburgh Fund," from which grants are made to incurable cases, and trusses and other surgical appliances gratuitously supplied to poor patients, affords boons which are highly appreciated. The long-felt want of a system of district nursing of the sick poor in their own homes is under consideration, and the necessary arrangements will, it is expected, be shortly completed.

LITERARY INTELLIGENCE.—Messrs. Cassell and Co. announce a new System of Surgery under the editorship of Mr. Frederick Treves, who has obtained the assistance of an exceedingly competent staff to deal with the various sections. The new system will be decidedly handy as well as compendious. For the fact that the information will be entirely trustworthy and level with modern research the names of the various writers will be a sufficient guarantee: while the general editorial instruction—"as the book will be primarily intended for students, each monograph should be concise, the subject matter should be arranged under convenient headings, and all controversial matter should be dealt with sparingly"—should ensure conciseness as far as may be compatible with thoroughness. The illustrations will be undertaken by Mr. Henry Tonks, a late demonstrator of anatomy at the London Hospital, and now instructor at the Slade School of Fine Art.

FOOTBALL CASUALTIES.—On the 8th inst., in a match between the St. John's College (Leatherhead) team and King's College Hospital, a member of the former team sustained a compound fracture of the left leg. On the 9th inst., at Portsmouth, during a match between the Royal Naval College and the Cameronian Regiment, a player sustained an injury to the abdomen, causing peritonitis, from which he died in the Haslar Hospital on Sunday last. The following accidents occurred on Saturday last:—While playing a game on the South Common, Lincoln, a youth fractured his ankle and was conveyed to the County Hospital. At Leicester, during a match between the Fosse and Derby County teams, a player fractured his clavicle. In a match at Portsmouth a player dislocated his humerus. On the 11th inst. a young man died in the Banbury Infirmary from injuries received while playing a match against the Oxford Jesus College team.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following foreign practitioners are announced:—Dr. Otto Langgaard of Berlin, an orthopædic surgeon who has written a good deal on his own special subject. His son is *privat-docent* in Pharmacology in the University of Berlin. He was seventy-nine years of age.—Dr. Frankenhauser, Professor of Medicine in the University of Jena and formerly Professor of Gynæcology in Zurich. He published papers on the Termination of the Nerves of the Uterus and on clinical subjects in the *Correspondenzblatt der Schweizer Aerzte*.—Dr. Karl Wenzel of Mayence, where he founded the National Germano-Roman Museum.—Dr. Scheutheuer, Professor of Pathological Anatomy in the University of Budapest and formerly for many years Rokitansky's assistant in Vienna.—Dr. Alexander Brugsch of Cairo, son of the well-known Egyptologist. He was an ophthalmic surgeon of considerable eminence, though he wrote but little.—Dr. Gouzée, Chief Medical Officer of the Belgian Army.—Dr. Peremeiko, Emeritus Professor of Histology and Embryology in the University of Kieff.—Dr. Lejard of Biarritz.

Parliamentary Intelligence.

THE HOUSE OF LORDS.

THURSDAY, FEB. 8TH.

The Local Government Bill.

THEIR lordships resumed in committee the consideration of several clauses of this Bill, but the discussion bore for the most part on points of a technical character, and not likely to have more than a general interest for our readers. Clause 31, however, which defines the duties and powers of county councils in respect of the rectification of areas and boundaries of parishes and rural sanitary districts partly within and partly outside an administrative county, was agreed to only after objection had been taken to the mode of drafting the clause, whilst the omission of one of its sub-sections and the amendment of some other parts of the clause were also insisted upon. Clause 54, again, which prohibits the meeting of a parish council, or of a district council, or of a board of guardians in premises licensed for the sale of intoxicating drinks, was not suffered to pass without strong opposition and the introduction of amendments. The other clauses were agreed to with comparatively little discussion, and the Bill as amended was then ordered to be reported to the House, and its consideration was fixed for Monday, the 12th. On this day accordingly the report of the Bill came up for consideration and two or three amendments were proposed and carried. On Tuesday the third reading was moved by Lord Kimberley, and after a few other alterations had been made in the measure it was read a third time and passed.

HOUSE OF COMMONS.

MONDAY, FEB. 12TH.

Visits to Infirmary Patients.

Mr. Macdonald wished to know upon what authority the chief medical officer at Kensington Infirmary refused to sanction a special visit to an aged inmate unless the latter were dangerously ill.—Mr. H. Fowler said that with regard to the case in question the Local Government Board had been informed that the applicant requested leave to visit an infirmary inmate who was not related to him and at a time other than that prescribed by the rules. In view of the fact that letters had passed between the applicant and the guardians the medical officer thought it expedient to refer the applicant to the clerk to the guardians, and that functionary had expressed the opinion that only in exceptional circumstances, to be subsequently reported to the guardians, would he feel justified in interfering with the medical officer's discretion in such a matter.

The Factory Acts.

Mr. Asquith, replying to a question put by Mr. Macdonald, said that no new rules had been issued by the Factory department, and anonymous complaints anent evasions of the provisions of the Factory Acts had always been, and would continue to be, treated with the same consideration as if the name of the complainant had been given.

Electric Wires under Public Thoroughfares.

Mr. Weir drew the attention of the President of the Local Government Board to the report of a case in Bournemouth in which a horse attached to a public vehicle was instantly killed and another seriously injured by, it was supposed, the passage of electricity from the wires running under the street.—Mr. Mundella said the electrical adviser of the Board had been instructed to make inquiry on the spot where the occurrence took place, and a copy of his report was at the service of the hon. member. Meanwhile the Board of Trade were considering whether further regulations were necessary to prevent similar accidents in future.

TUESDAY, FEB. 13TH.

Labourers' Cottages.

In reply to a question put by Mr. Yerburgh to the President of the Local Government Board as to the present condition of labourers' cottages with respect to size and sanitary condition, Mr. H. Fowler said he was aware of the reports of the sub-commissioners appointed by the Royal Commission on Labour on this matter. The sanitary authorities had full power to deal with cottages in an unwholesome condition, and the reports referred to were dealt with in connexion with the reports yearly furnished by the medical officers of health to the Local Government Board.

Meat-supply at Chelsea Barracks.

On this subject questions were asked by Sir A. Acland-Hood and Mr. Burns, and, in reply thereto, Mr. Campbell-Bannerman stated that not more than 60 per cent. of the meat supplied to the army was permitted to be of foreign or colonial importation, and then only during the winter. An expert had, he said, been appointed whose duty it was to see that the meat contracts were duly carried out.

THURSDAY, FEB. 15TH.

The Marking of Meat.

Sir Herbert Maxwell asked the President of the Board of Agriculture whether his attention had been called to the serious allegations made in evidence before the Committee of the House of Lords as to the extent to which American and Colonial beef is dressed wholesale and sold retail as "best Scots" and English meat. And, whether he had undertaken or directed, or intended to undertake or direct, inquiry into the truth of these allegations, in the interest of honest trade and British agriculture.—Mr. Herbert Gardner replied that he had given careful consideration to the evidence to which the hon. baronet referred, and he had been and still was in communication respecting it with the President of the Board of Trade, within whose jurisdiction the marking of merchandise lay. He had neither the means nor the power to make or direct further inquiry as to the allegations made before the Committee, but he should be very glad to be supplied with particulars of cases of false description of meat and to consult with the President of the Board of Trade with regard to them.—Mr. James Lowther asked the right hon. gentleman whether, if he was supplied with these particulars, he would take steps for a prosecution.—Mr. Gardner replied that he would confer with the President of the Board of Trade.

Hours of Labour in Dangerous Trades.

Mr. Halley Stewart, on behalf of Mr. Brunner, asked the Secretary of State for the Home Department whether he would consider the advisability of extending the proposed legislation, which would give the Secretary of State power to deal with the unreasonably long hours of labour in dangerous trades, and would make it apply to all trades involving continuous day and night work in which the hours of labour shall seem to him to be of unreasonable and harmful length.—Mr. Asquith said he was not at the present moment in a position to make any definite statement on the subject of proposed legislation, but he could assure his hon. friend that the point to which he referred would receive careful consideration.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ATKINS, S.E, L.R.C.S. Irel., has been appointed Medical Officer for the parishes of Dalwood, Kilmington, Stockland and Membury, and Registrar of Births and Deaths

BRAIDE, GEO., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the second sanitary district of the Warrington Union.

BREDIN, J. NOBLE, L.R.C.S.I., L.R.Q.C.P.I. and L.S.A., has been appointed Medical Officer to the staff, Great Eastern Hotel, Liverpool-street, vice Beswick.

BRERETON, J. G., L.R.C.P., L.R.C.S., S.M.Irel., has been appointed Medical Officer of Health for the Ryde District of the Isle of Wight.

CAREY, C., L.R.C.P.Edin., L.M., M.R.C.S., has been appointed Medical Officer of the Cottage Hospital, Bromsgrove.

COLLIER, H., M.D. Brux., L.R.C.P. Lond., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Deputy Medical Officer at the Workhouse Infirmary, Great Yarmouth.

COOMBE, C. F., L.R.C.P. Edin., M.R.C.S., has been appointed Honorary Medical Officer to the Children's Hospital, Sheffield, vice James, resigned.

COUCH, J., M.R.C.S., has been appointed Pathologist Anæsthetist to the Swansea General Hospital.

CRUICKSHANK, WILLIAM, M.B., C.M. Edin., has been appointed House Physician to the Hospital for Sick Children, Aberdeen, vice Fowlie.

DODSWORTH, F. C., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for Chiswick, Middlesex.

GRACE, HENRY, L.R.C.P. Lond., M.R.C.S., L.M., has been reappointed Medical Officer of Health for Kingswood.

GRIFFITHS, HOWELL J. M.B., B.S. Lond., M.R.C.S., L.R.C.P. Eng., has been appointed Second Assistant Medical Officer to the Greenwich Union Infirmary.

HALE, E. T., L.R.C.P., L.R.C.S., L.M Edin., has been appointed Medical Officer for the Fourth Sanitary District of the Bedminster Union, vice Edmond.

HARTY, J. T., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Deputy District Medical Officer for the Liskeard Union.

HICKEY, G. A., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the New Ross Union Workhouse.

LEE, CHARLES GEORGE, M.R.C.S. Eng., has been appointed Honorary Aural Surgeon to the Royal Southern Hospital, Liverpool.

LOUGHRIDGE, J. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed, pro tem., Medical Officer for the Belfast No. 8 Dispensary District.

MACKINTOSH, A., M.D. Glasg., L.F.P.S., L.M., has been re-appointed Medical Officer of Health by the Clay Cross Local Board.

NIVEN, JAS., M.B. Camb., B.C., has been appointed Medical Officer of Health of the city of Manchester.

PEARCE, ARTHUR, M.R.C.S., has been reappointed Medical Officer of Health of the Kingsbridge and Salcombe Port.

PERRY, FRED. W., L.R.C.P.I., L.R.C.S.I., L.M. Dubl., has been appointed House Surgeon to the Pendleton Branch Dispensary, vice John Valentine, deceased.

QUARRY, M. H., M.B., B.Ch. Irel., has been appointd Assisatent Medical Officer to the Lambeth Infirmary.

ROBERTSON, J. H., M.B., M.S. Edin., has been appointed Medical Officer of Health for the Byhope and Tunstall Sanitary District.

ROBINSON, FREDERIC CECIL, M.R.C.S., Eng., L.R.C.P. Lond., had been appointed Fifth Assistant Medical Officer to the London County Asylum, Colney Hatch, vice H. G. Shaw, deceased.

SAWYER, J. A. F., L.R.C.P., L.R.C.S. Irel., has been re-appointed, Medical Officer of Health for Clevedon.

SHAW, R. H., M.B., B.Ch. Dubl., has been appointed House Surgeon to Mercer's Hospital, Dublin.

STOBO, JAS., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg. has been appointed Medical Officer of Southwick.

STREETEN, F. E. M.R.C.S. Eng., L.R.C.P., L.M. Edin., D.P.H., R.C.S.I., has been appointed Medical Officer of Health to the New Swindon Local Board, vice Swinhoe, resigned.

THOMAS, A. W., L.R.C.P., L.M., L.R.C.S. Edin., has been re-appointed Medical Officer of Health for the Swaffham Urban Sanitary District.

UNDERHILL, T. O., M.D. Edin., F.R.C.S., has been appointed Medical Officer to the Cottage Hospital, Bromsgrove.

WILLSON, ALFRED, L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the City Hospitals, Sheffield.

WILLIAMS, RICHARD, M.R.C.S., has been appointed Ophthalmic Surgeon to the Royal Southern Hospital, Liverpool.

YOUNG, JAS., L.R.C.P. Lond., M.R.C.S. has been appointed a District Medical Officer by the St. George Local Board, Bristol.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BACTERIOLOGICAL INSTITUTE, Cape Colony.—Medical Assistant. Salary £350 per annum, and the successful candidate will be provided with a free passage (first class) to the Colony. Applications to Mr. Chas. Loudon, W.S., 54, Queen-street, Edinburgh.

BELGRAVE HOSPITAL FOR CHILDREN Gloucester-street, Pimlico, S.W.—House Surgeon. Board, lodging, fuel and light provided. Applications to Hon. Sec., 7, Victoria-street, Westminster.

BURY DISPENSARY HOSPITAL, Bury, Lancashire.—Junior House Surgeon. Salary £60 per annum, with board, residence and attendance.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Medical Officer. Salary £100 per annum, with board, &c. Applications to the Secretary, at the office, 24, Finsbury-circus, E.C.

CORPORATION OF CROYDON.—Resident Medical Officer for the Borough Isolation Hospital for Infectious Diseases. Salary £150 per annum, increased by £20 at the end of the first year, with board and lodging. Applications to the Medical Officer of Health, 7, Katharine-street, Croydon.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary commences at £100 a year, with prospect of an annual rise of £25 up to £200, with further increase according to promotion, together with furnished apartments, board, attendance, and washing.

COUNTY BOROUGH OF OLDHAM.—Medical Officer of Health for the Borough, and Medical Director and Attendant of the Infectious Diseases Hospitals. Salary £400 per annum. Applications to the Town Clerk, Town Hall, Oldham.

COUNTY LUNATIC ASYLUM, Snenton, Nottingham.—Assistant Medical Officer, unmarried. Salary £100 a year, rising £10 annually to £150, with board, lodging, washing, and attendance.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House Surgeon for one year. Salary £40 per annum, with board, lodging, and washing.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, London, E.—Pathologist and Registrar. Honorarium £40 per annum.

EAST SUFFOLK AND IPSWICH HOSPITAL, Ipswich.—House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

FEMALE LOCK HOSPITAL, Harrow-road, W.—Assistant House Surgeon, for twelve months. Board and lodging provided.

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury avenue, W.C.—Resident Medical Officer. Must speak French. Salary £80 per annum, with board, furnished rooms and attendance.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway.—Physician to out-patients.

HOSPITAL FOR WOMEN, Soho-square, London, W.—House Physician. Salary £30 for six months, with board, &c.

LONDON HOSPITAL, E.—Physician.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Residence in the hospital, board, and washing provided, and an honorarium of five guineas on satisfactory completion of term of appointment.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer, at the Infirmary of the Convalescent Hospital at Cheadle, for twelve months, unmarried. Salary £150 per annum, with board and residence.

MIDDLESEX HOSPITAL. W.—Clinical Assistant in the Out-patient Department for Diseases of the Skin.

NATIONAL ORTHOPÆDIC HOSPITAL, Great Portland-street, W.—Assistant Surgeon.

OXFORD EYE HOSPITAL.—House Surgeon for one year. Salary £50, with board and lodging.

PARISH OF PADDINGTON.—Medical Officer of Health. Salary £600 per annum. Age not to exceed thirty-five years. Applications to the Vestry Clerk, Vestry Hall, Harrow-road, W.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone, N.W.—Resident Medical Officer for four months. Salary at the rate of £60 per annum, with board and residence in the hospital.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—House Surgeon, for one year. Salary, £100 per annum, with board and lodging.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Senior House Surgeon, unmarried. Salary £100, with board, lodging and washing.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

ST. PANCRAS AND NORTHERN DISPENSARY, 125, Euston-road.—Honorary Physician.

TIVERTON INFIRMARY AND DISPENSARY.—House Surgeon and Dispenser, unmarried. Salary £100 per annum, with lodgings, attendance, fire, and lights. Applications to Mr. Arthur Fisher, Hon. Secretary, Tiverton, Devon.

Births and Deaths.

BIRTHS.

BAKER.—On Feb. 11th, at Church-end, Finchley, the wife of J. B. Baker, M.D., of a daughter.

DOWNING.—On Jan. 28th, at Wellington House, Charles-street, Cardiff, the wife of Charles Downing, L.R.C.P. Lond., M.R.C.S. Eng., of a son.

HARRIS.—On Feb. 8th, at Wimpole-street, Cavendish-square, W., the wife of Vincent Dormer Harris, M.D., F.R.C.P., of a daughter.

JOLLY.—On Feb. 6th, at Sydenham, the wife of S. Blake Jolly, M.B. Cantab., M.R.C.S. Eng., of a son.

PORTER.—On Feb. 9th, at Wood-green, the wife of W. E. Porter, M.D., of a son.

DEATHS.

COLLOT.—On Feb. 11th, at Malta, James Alexander Collot, Staff-Surgeon, H.M.S. *Collingwood*, in his 45th year.

FOX.—On the 4th inst., at Ardgowan-square, Greenock, N.B., John Fox, M.D., formerly of Carlisimore, county Cavan.

MEDWIN.—On the 10th inst., at Folkestone, George A. Medwin, M.D., of Bruton-street, Berkeley-square, W.

NICHOLAS.—On Feb. 9th, at 2 and 3, Church Row, Wandsworth, George Edward Nicholas, M.D., M.R.C.S., L.S.A., District Medical Officer and Medical Officer of Health, Wandsworth, in his 70th year.

PICKERING.—On Feb. 12th, at Monte Carlo, Dr. Thomas Henry Pickering, aged 54.

WATSON.—On the 9th inst., at the Tower of London, James Watson, F.R.C.S., Brigade-Surgeon Army Medical Staff, retired, aged 57.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.). St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Great Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Great Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Chelsea (2 P.M.), Soho-sq. (2 P.M.), North West London (2 P.M.)

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.)

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL OFFICERS OF HEALTH SOCIETY (20, Hanover-square, W.).—8 P.M. Dr. Ed. Seaton will open a Discussion upon Vaccination and the Laws relating thereto.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Joseph White (Nottingham): The Administration of Anæsthetics clinically considered.—Dr. Wethered: The Diagnosis of Diphtheria by Bacteriological Cultures.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—Dr. Elwin Harris: Sclerosis of Skull associated with Growth in the Brain.—Mr. F. T. Paul: Specimens illustrating the Pathology of Rodent Ulcer.—Dr. Kanthack and Mr. Byers: Specimens of Rodent Ulcer without Ulceration.—Mr. Anthony Bowlby: Sixty-six cases of Rodent Ulcer. Dr. Scholefield: Sarcoma of the Supra-renal Body in a Child. Card Specimen:—Dr. Charlewood Turner: Stomach from a case of Oxalic Acid Poisoning.

WEDNESDAY.—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-st., Cavendish-sq.).—8 P.M. Dr. Frank Clemow: A Contribution to the Epidemiology of Cholera in Russia.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Prof. G. S. Brady: Fucitrogus Rhoydymeniæ, a Gall-producing Copepod.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—Living Specimens at 8 P.M.:—Dr. Sansom: A case of Aphasia.—Dr. Francis Hawkins: Displacement of Heart in a Child due to Fibroid Phthisis.—Mr. Stanley Boyd: Knee after Rupture of Anterior Crucial Ligament.—Mr. Battle: (1) A case of Wiring the Pelvis after Compound Fracture; (2) Reduction of Intractable Dislocation of the Hip by means of Incision of the Joint.—Dr. Harry Campbell: Interstitial Nephritis with Albuminuric Retinitis in a Youth aged Nineteen.—Dr. Arthur Davies: (1) A case of Myxœdema after Thyroid Feeding; (2) Partial Congenital Dislocation of both Clavicles.—Dr. Wilberforce Smith: Large Apical Cavity. Treatment by Carbolic Hat-box Respirator, Cicatriation.—Mr. Bland Sutton: A case of Excision of part of the Clavicle for Myeloid Sarcoma four years ago.—Dr. Calvert: A case of Hysteria in which the Breathing is almost entirely Diaphragmatic. Mr. Storer Bennett: A case of Dentigerous Cyst in the Upper Jaw with the tooth in situ. Papers at 9 P.M.:—Dr. Mott: Multiple Toxæmic Neuritis.—Dr. Hale White: Diphtheritic Peripheral Neuritis causing Sudden Death.—Mr. Mansell Moullin: A case of Cerebral Abscess. Mr. Battle: Three cases of Extra-dural Hæmorrhage.

LECTURES AND ADDRESSES.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. A. S. Morton: Ocular Injuries. London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Whistler: Syphilis as it affects the Larynx.—Bacteriological Laboratory, King's College, 3 P.M., Prof. Crookshank and Dr. Hewlett: Typhoid Fever and Diphtheria.

THROAT HOSPITAL (Golden-sq., W.).—5 P.M. Dr. Greville MacDonald: Hay Fever and Asthma.

ST. JOHN'S HOSPITAL FOR SKIN DISEASES (Leicester-sq., W.C.).—6 P.M. Dr. Morgan Dockrell: Ulerythema and Sycosis.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Hyslop: Insanity with Cardiac Disease, Phthisis, Gout &c.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: Locomotion and Fixation in Plants and Animals.

ROYAL COLLEGE OF PHYSICIANS OF LONDON (Examination Hall, Victoria Embankment).—5 P.M. Dr. J. Berry Haycraft: Weismannism Disease and Race Progress. (Milroy Lecture.)

WEDNESDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton, 4 P.M., Dr. Habershon: Demonstration of cases from the Post-mortem Room.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Glaucoma.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Seborrhœa.

THROAT HOSPITAL (Golden-square, W.).—5 P.M. Mr. F. G. Harvey: Chronic Middle Ear Catarrh (Moist).

WEST LONDON HOSPITAL (Hammersmith, W.).—5 P.M. Dr. William Hunter: Disease of the Blood (with lantern demonstration). (Post-graduate Course.)

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. Penrose: Tuberculosis in Children.—National Hospital for Paralysed, Bloomsbury, 2 P.M., Dr. Taylor: Muscular Atrophy.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. Henry T. Butlin: Cases in the Wards.

ROYAL COLLEGE OF PHYSICIANS OF LONDON (Examination Hall, Victoria Embankment).—5 P.M. Dr. J. Berry Haycraft: Weismannism Disease and Race Progress. (Milroy Lecture.)

FRIDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton, 4 P.M., Dr. R. Douglas Powell: Angina Pectoris.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Corner: Insanity with Syphilis; Insanity with Organic Brain Disease.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, February 15th, 1894.

	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Feb. 9	29·96	S.W.	45	43	71	54	41	—	Overcast
,, 10	29·77	S.W.	45	43	64	52	43	0·02	Cloudy
,, 11	29·61	S.W.	51	49	69	55	44	..	Cloudy
,, 12	29·47	S.W.	42	39	78	48	39	0·05	Bright
,, 13	29·92	N.W.	38	38	71	48	36	..	Hazy
,, 14	30·16	W.	36	35	71	44	33	..	Overcast
,, 15	30·15	S.E.	39	39	46	43	36	0·08	Raining

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

"FREE ADVICE COUPON."

OUR attention has been called to the column with the above heading in a contemporary, *The Cable*, which informs its readers that the column is conducted by "an eminent London Physician, Dr. Augustus Harbord." We agree with a correspondent that the function is not a very dignified one. We gladly recognise in the answers to correspondents the frequent advice to consult their medical adviser. But we submit to Mr. Harbord that with all the superfluous facilities for gratuitous advice now existing it is scarcely satisfactory that a member of the profession should undertake to give advice through a newspaper to those who are, or should be, the patients of other medical men, and that the weekly advertisement of his name as "an eminent London Physician" is not what he would approve in another practitioner.

Alpha should consult his medical attendant.

INCORRECT TITLES AND THE ENDORSEMENT OF CHEQUES.

A LAY correspondent writes us that in paying his medical man his account, he made it payable to, say, "Dr. A. B." On the cheque coming back to him after payment it was endorsed, not "Dr. A. B.," but "A. B., M.D." Our correspondent assumes that the medical man being known to the banker as "Dr. A. B.," and the cheque being so made out, required him to sign as "Dr. A. B.," or to put titles indicating that he was a medical practitioner. Our correspondent says that he knows that the banker will accept an endorsement of M.R.C.S., L.R.C.P., or M.B. just as readily as M.D., but nevertheless A. B. continues to endorse his cheques as A. B., M.D., though he is not M.D., but simply L.R.C.P.Lond. "Happy is he that condemneth not himself in that which he alloweth." But A. B. will see that the ethical principle on which he proceeds is not apparent to one of his patients, as it is not to us. Our correspondent can do something to correct this error by giving his medical man his proper title when he has occasion again to write a cheque.

Puzzled.—The claim is not one which admits of legal definition unless specifically provided for in the deed. It should be settled by friendly consideration on both sides, illness being the ground for the purchaser not taking his share of the work.

THE PRESERVATION OF DRUGS.

To the Editors of THE LANCET.

SIRS,—While on the West African coast I received some hypodermic tablets. I used them shortly afterwards, and the results appeared to be satisfactory. About six months then elapsed and I had been one journey down the Ancobra river. I must here note that all my special drugs were carried in air-tight cases. At this time they showed the following changes. A bluish-grey mould was growing in cases containing tubes, on corks, in some tubes themselves, and even the outer portion of the drug tablets seemed to undergo liquefaction; the tablets stuck together so that they could not be shaken out separately from the tubes, and in some tubes finally they were adherent to the sides, thus being rendered useless as medicinal agents. These appearances gave me the impression that septic (?) bacteria were being developed. Now, in the tropics one has often to rely solely on subcutaneous medication to obviate the rapid tendency to death by administering accurate doses of drugs whose activity must be unimpaired or they are useless. (I had at the same time and under the same conditions tabloids which were active and unimpaired after two years.) This question of imperfection in the excipient of these important items of a surgeon's equipment in the tropics is very urgent, as lives might be lost through using the ordinary hypodermic solutions or pellets, which may chance to be impaired. I would like to ask not only the profession, but also experts belonging to any firm manufacturing such articles, Is there no excipient which can be used to render these pellets or tablets more permanent, less liable to rapid decomposition and consequently more reliable than the sample tablets I send you appear to have been. I trust I have not erred in deeming THE LANCET the best medium through which to acquire the exact scientific information I need. In case you should so far favour me by inserting this letter it will greatly oblige,

Yours faithfully,

CHARLES FORBES, M.D., C.M., D.P.H. Cantab.,
Late Surgeon, Wassa Gold Mines, West Africa.

Feb. 10th, 1894.

PROPOSAL FOR AMENDING THE SYSTEM OF MEDICAL CLUBS AND ASSOCIATIONS.

Mr. Henry Hick kindly directs our attention to the Rules of the National Deposit Friendly Society as bearing on the suggestions of Mr. Murtaugh Haughton in last week's issue of THE LANCET. There is a scale of medical charges, and members are at liberty to send for any duly qualified medical practitioner who is willing to attend them on the terms of the Society, and is approved by the county sub-committee; but unless the nearest duly qualified medical practitioner is employed the extra mileage must be paid by the member out of his or her own deposit. The scale for surgical accidents is very much that of the Poor-law. That for medical cases is as follows: Visit with medicine for two days, 2*s.* 6*d.*; ditto beyond three miles, extra per mile, 6*d.*; attendance at surgery and medicine, 1*s.* 6*d.*; fresh supply of medicine for two days, 1*s.*

THE PRODUCTION OF CAMPHOR IN FORMOSA.

ACCORDING to the British Foreign Office Report, the manufacture of this stearoptene is one of the principal industries of Formosa. As in Japan, the means at present employed in the extraction from the camphor laurel of the concrete volatile oil which it contains are of the most rude description, although the process is simply one of sublimation. The huge tree, which has been known to attain the girth of 6ft., is cut into chips, through a heap of which steam is made to pass. A series of earthenware jars or condensers receive the impregnated steam, which deposits on the sides of the jars a layer of camphor crystals, which, unlike that produced in Japan, do not solidify under pressure.

THE REDUCTION OF CORPULENCE.

AMONG the many divisions and sub-divisions which go to form the loosely constructed realm of specialism there is probably none more ancient, none more fashionable, than that in which the staple industry is the reduction of fatty tissue. A variety of systems have been devised for this purpose, each of them as it were a modification of one original patent, which implies no special skill in its application, but only a clear perception of generally-known and well-established physiological facts. It is not by mere adhesion to a meat regimen, nor is it by athletic energy alone that the fat man can hope to become spare. It is in brief by observing a regular and moderate habit both in regard to food consumption and to physical exertion that this result can be at once most surely and most safely achieved, and its accomplishment depends far more upon the individual good sense of stout persons themselves than upon any professional adviser however learned. It is doubtless beneficial in many cases to adhere to a dietary containing less of the fatty and carbohydrate and more of the nitrogenous elements, but this general rule must not be so strained as to subject the much-enduring kidney to over-pressure in its duty of excretion. Age and vital condition as expressed in the state of this organ are matters which no judicious adviser can afford to overlook. The due nutrition of other organs has to be considered in like manner. A similar discretion must be exercised with respect to beverages. The less of alcohol or of malt the better if we would be thin, but here again the requirements of the individual will assert themselves. The observance of times at which food is taken is of hardly less importance. The tendency with many, if not most, persons, we take it, is to err on the side of frequency. It is obvious that the system which is plied with food at intervals too brief to ensure the digestion of each meal cannot possibly escape the accumulation within its tissues of much waste material, and some of this surplus will surely be deposited as fat. To allow a period of from four to six hours to elapse between any two meals will be found to be good practice in the case of most persons capable of enjoying and well digesting food. The question of exercise must not be overlooked. Nowadays it is customary to overdo physical exertion, and here again personal considerations are all important. Corpulence, it must not be forgotten, is a sign of weakness, and it is of vital consequence that the degree of this should be gauged before any course of exercise be undertaken. The true measure of utility with regard to muscular effort is in every case indicated by the limits imposed by fatigue. To force energy to the stage of exhaustion may indeed reduce somewhat the bulk of adipose tissue, but at the ruinous cost of vital power and to risk health it may be to a dangerous extent. We would very shortly sum up the foregoing observations by repeating the statement that there is indeed no specially curative treatment for obesity, but that a spare physique can only be safely attained by temperance in the general method of life. Save in accordance with this rule it is not even desirable.

"CUBE ICE."

IN reference to the article on this subject in our last issue, it would seem from the letter of a correspondent that the expression that it is necessary to "warm" the ice first is perhaps capable of misinterpretation. It is only necessary to allow "cube ice" to stand a short time on the table, when it will be ready for fracture in the elegant and symmetrical way indicated.

ERRATUM.—In our short notice of the late meeting of the members of the London and Counties Medical Protection Society (p. 310) the name of one of the councillors was given wrongly. Instead of Mr. G. F. Pollard, it should have been printed "Dr. Frederick Pollard."

COMMUNICATIONS not noticed in our present issue shall receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Liverpool Journal of Commerce, Dundee Advertiser, Manchester Examiner, Daily Chronicle, Yorkshire Post, Bristol Mercury, Liverpool Daily Post, Leeds Mercury, Local Government Chronicle, The Silent World (Philadelphia), Weekly Free Post and Aberdeen Herald, Reading Mercury, Sanitary Record, Hertfordshire Mercury, City Press, West Middlesex Standard, Leicester Daily Express, Citizen, Sunday Times, Builder, Times of India, Architect, Pioneer Mail, Brighton Gazette, Provincial Medical Journal, West Middlesex Advertiser, Derbyshire Times, Bath Argus, Globe, Guy's Hospital Gazette, Surrey Advertiser, Southampton Times, Science Siftings, Australian Irrigation Colonies Record, Local Government Journal, Drogheda Conservative, Galignani Messenger, Lynn News, Worcester Echo, Civil Service Gazette, New York Herald, Auckland Times, New Zealand Herald, Madras Times, Surrey Times, Scarborough Post, Blackpool Times, Northampton Guardian, Southport Guardian, Gravesend Standard, Bolton Chronicle, Kettering Guardian, Evening News and Post, Dewsbury District News, Birkenhead News, Oundle Guardian, &c., &c.*

Communications, Letters &c. have been received from—

A.—Dr. F. P. Atkinson, Surbiton; Mr. F. V. Allen, Madura; An Unhappy Mother.

B.—Dr. R. Broadbent, Leicester; Dr. J. F. Bullar, Southampton; Dr. W. W. Baldwin, Florence; Mr. T. B. Browne, London; Messrs. W. H. Bailey and Son, London; Messrs. Burroughs, Wellcome and Co., London; Bury Dispensary Hospital, Secretary of.

C.—Dr. Harry Campbell, London; Dr. F. W. Collinson, Preston; Messrs. Crossley, Moir and Co., London; Messrs. Chapman and Co., London; Cataract, London; C. B. C., London.

D.—Dr. Lovell Drage, Hatfield; Dr. Naoroji B. Darabseth, Bombay; Mons. De Naeyer, Brussels; Mr. D. Daily, Derby; Messrs. Davies and Rhys, Aberdare; Messrs. A. De St. Dalmas and Co., Leicester; Dare quam accipere.

E.—Dr. G. M. Edwards, London; Expectans, London.

F.—Mr. John Fitzgerald, London.

G.—Dr. H. Willoughby Gardner, Shrewsbury; Dr. J. J. Gorham, Garstang; Dr. John Glen, York; Dr. H. L. Gordon, London; Mr. T. W. Graves, Knighton; Mr. H. R. Greene, Knaphill; Messrs. J. and H. Grace, Bristol; Messrs. J. Gill and Sons, Heckmondwike; Messrs. Grierson, Oldham and Co., London; Messrs. Goodall, Backhouse and Co., Leeds; G. P.

H.—Dr. F. W. Hewitt, London; Dr. Hamilton, Hawick; Dr. E. Hay, London; Dr. B Howard, Margate; Mr. J. Heywood, Manchester; Mr. T. W. Hannaford, London; Mr. D. Hume, London; Mr. E. Huxley, London; Mr. Hampson, Stockport; Mr. C. F. Hope, Weymouth; Miss Henderson, Westgate-on-Sea; Messrs. Heal and Son, London; Huddersfield Union, Clerk of; Halifax, Ward's End; H. P., London.

I.—Inquirens, London.

J.—Mr. W. Makeig Jones, Swindon; J. Y.

K.—Dr. Norman Kerr, London; Dr. James Kerr, Bradford; Mr. H. Kinder, Leicester; Mr T. O. Keenan, Dublin; Mr. J. Kühn, London.

L.—Mr. Sheridan Lea, Cambridge; Mr. C. J. Lathbury, Dunstable; London Lock Hospital, Secretary of; London and Counties Medical Protection Society, Ltd., London, Hon. Secretary of.

M.—Dr. C. F. Moore, Dublin; Mr. W. H. Millar, London; Mr. Alex. D. MacDowall, London; Messrs. Macmillan and Co., London; Messrs. Margrave Bros., London; Macclesfield Infirmary, Secretary of; Midland Medical Society, Birmingham, Secretary of; Manchester Royal Infirmary, Secretary of; Maltine Manufacturing Co., London; Medical Officer, Stronsay; Male Nurse; Melton, London.

N.—Mr. A. J. Newman, Windermere; Nelson, Croydon.

O.—Dr. Isambard Owen, London; Prof. Alex. Ogston, Aberdeen; Messrs. Oppenheimer, Son and Co., London; Oldham County Borough, Clerk of; Ophthalmos, London.

P.—Dr. C. B. Plowright, King's Lynn; Dr. A. E. Permewan, Redruth; Dr. James Pleasant Parker, St. Louis; Dr. A. G. Phear, London; Mr. G. Hopkins Pegsy, Cardio Rectory, North Wales; Mr. A. E. Pratt, Paris; Phillips, London; P., London; Phola, London.

R.—Dr. J. Reynolds, London; Mr. Carl Reichert, London; Mr. R. Redpath, Newcastle-on-Tyne; Mr. James T. T. Ramsay, Blackburn; Mr. J. T. H. Richardson, Burton-on-Trent; Messrs. Robertson & Scott, Edinburgh; Messrs. Rivington, Percival and Co., London; Royal South Hants Infirmary, Southampton, Secretary of; Rainhill County Asylum, Clerk of; Reuter's Telegram Co., Limited, London; Royal National Hospital, Ventnor, General Superintendent of.

S.—Dr. H. Snow, London; Dr. C. S. Sherrington, London; Dr. R. H. Shaw, Newcastle-on-Tyne; Mr. H Sell, London; Mr. A. E. Smith, London; Mr. Smith, Oldham; Messrs. Sharland and Co., London; Messrs. Street Bros., London; Stirling and Dumbarton County Council, Glasgow; Stockport Infirmary, Secretary of; Sheffield Public Hospital, Hon. Secretary of; Sanitary Institute, London, Hon. Secretary of.

T.—Dr. G. D. Turnbull, Upper Musquodoboit, N. S.; Mr. Silvanus Trevail, Truro; Mrs. Turner, London.

V.—Messrs. Vigor and Co., London.

W.—Dr. F. J. Waldo, London; Mr. George Wherry, Cambridge; Dr. J. J. Welply, Cork; Dr. H. W. Webber, Rickmansworth; Mr. W. E. Welch, Portsmouth; Mr. R. Watson, London; Mr. W. Webster, Lynn; Mr. C. Williams, Norwich; Mrs. Whiteford, London; Messrs. A. P. Watt and Son, London; Messrs. Wilcox and Co., London; Whittingham County Asylum, Preston, Clerk of; W. G.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. Adam, West Malling; Dr. F. H. Alderson, London; Dr. J. R. Armstrong, Abergele; Mr. G. B. M. Atkins, Birmingham; Agricola, London; A. T., Huddersfield; A. B. R., London; A., Sheffield.

B.—Dr. N. T. Bond, Tamworth; Dr. J. J. Bailey, Marple; Mr. H. F. S. Blucke, Towcester; Mr. H. L. H. Brooks, London; Mr. H. H. Ballachey, Chelford; Mr. H. R. H. Bigg, London; Messrs. J. L. Bullock and Co., London; B. M. G., Exeter; B., Manchester; Basil, London; Beta, London; Brampton, London; Bow, 1, Tredegar-road.

C.—Dr. W. C. Carter, Preston; Mr. R. Cockerton, Soham; Mr. T. Crosby, Kidderminster; Miss L. D. Costelloe, Arrington; Messrs A. M. Clay and Co., Grimsby; College of Preceptors, London, Secretary of; Chemist, London; Chromos, London; Chirurg., London.

D.—Dr. T. S. Dowse, London; Dr. A. M. De Souza, Bombay; Mr. C. Downing, Cardiff; Mr. D. Davies, Aberdare; Mrs. Downes, Clifton; Mrs. Dunn, Bushey Heath; Messrs. Dowie and Marshall, London; Durham, Newcastle-on-Tyne; Doctor, Bristol; Dentist, London.

E.—Mr. W. G. Ellis, Attleborough; Englishman, London.

F.—Mr W. A. Frost, London; F.R.C.S., London.

G.—Dr. P. Goold, Macroom; Mr. C. Greville, Sheffield; Mr. G. B. Gorrick, East Hoathly; Messrs. E. Gould and Son, London.

H.—Dr. J. Hall, Galashiels; Dr. J. Hunter, Abington, N.B.; Dr. V. D. Harris, London; Hamilton Association, London; Humerus, London; H. M., London; H. P., London; Hogar, London.

J.—Dr. H. M. Jones, London; Messrs. W. and A. K. Johnstone, Edinburgh.

K.—Mr. E. W. Kemp, Castleford.

L.—Mr. S. C. Lawrence, Tilt Cove N.F.; Messrs. Lee and Martin, Birmingham; Messrs. Lee and Nightingale, Liverpool; London Skin Hospital, Secretary of; Lowestoft Borough, Accountant of; Lignum, London; Leeds, London; Lady Superintendent, Streatham.

M.—Dr. J. G. McNaught, Curragh Camp; Dr. A Mackay, Darlington; Dr. H. B. Melville, Ballia, India; Mr. R. T. Morgan, Clevedon; Messrs. Maythorn and Son, Biggleswade; Merchant Banking Co., Limited, London, Cashier of; Medicus, Prestonpans; M.R.C.S., Dorchester; Medico, Bournemouth; Mater, London; M D., London; Mille, London; Medicus, London; M.O.H., London; Malvernian, London.

N.—Mr. J. W. Norman, Paignton.

P.—Mr. C. E Phillips, Hastings; Miss M. C. Pincoffs, Dunster; P. K., London.

R.—Messrs. Rowntree and Co., York; Ryde Gas Light Co., Secretary of; R. A., London.

S.—Mr. T Smith, London; Mr. J. Smith, London; S.A.K., London; Supellex, London; Salophen, London; Socius, London.

T.—Dr. G. M. E Thorp, Stourport; Mr. J. Thin, Edinburgh; T. H., London; Triceps, London; T. W., London.

V.—Senhor F. Vaz, Porto.

W.—Dr. J. H. Waterhouse, Rotherham; Dr. J. Watt, Attleborough; Mr. W. W. Wingate, Tonbridge; Mr. W. J. Walker, Wakefield; Messrs. Whitehead Bros., London; Wrexham Infirmary, Secretary of; Women's Temperance Home, Sydenham, Treasurer of; Wirral Children's Hospital, Birkenhead, Treasurer of; Wye House Asylum, Buxton, Medical Superintendent of; W. W., Edinburgh; Wevil, London.

X.—Xerxes, London; X. L., London.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year ..... £1 12 6 | Six Months £0 16 6

TO THE CONTINENT, COLONIES, UNITED STATES, INDIA, CHINA, AND ALL PLACES ABROAD ..... One Year 1 14 8

*** In consequence of the new postal arrangements, the Annual Subscription for India, China, and all foreign countries will now be reduced to £1 14s. 8d., instead of £1 16s. 10d. as formerly.

Post Office Orders and Cheques should be addressed to The Publisher, THE LANCET Office, 423, Strand, London, and crossed "London and Westminster Bank, St. James's-square."

ADVERTISING.

Books and Publications (seven lines and under)	£0 5 0
Official and General Announcements	0 5 0
Trade and Miscellaneous Advertisements	0 4 6
Every additional Line	0 0 6
Front Page	0 1 0 per Line
Quarter Page	1 10 0
Half a Page	2 15 0
An Entire Page	5 5 0

The Publisher cannot hold himself responsible for the return of testimonials &c. sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

*** THE LANCET can be obtained at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières-Paris.